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BRITISH GYNÆCOLOGICAL SOCIETY



*Edited by*

*FANCOURT BARNES, M.D.*

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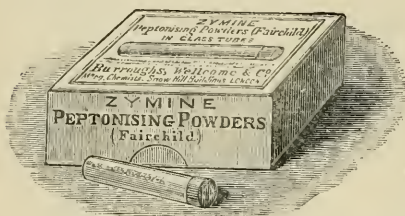
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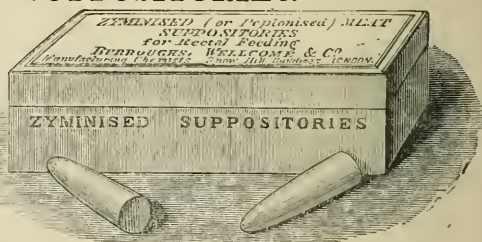
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When cows' milk is given with a little Kepler Extract it does not curdle and disagree as is so often the case. Many reports have been made by physicians of infants fed on milk so prepared progressing favourably when nothing else agreed. One thing seems certain, which is, that if cow's milk is to be given to invalids and infants, it should either be administered as above described, or else peptonised (see *Fairchild's Peptonising Powders*).

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AUGUST, 1888.

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## *THE BRITISH GYNÆCOLOGICAL SOCIETY.*

WEDNESDAY, MARCH 28, 1888.

ARTHUR W. EDIS, M.D., F.R.C.P., PRESIDENT, IN THE CHAIR.

PRESENT: 32 Fellows, 13 Visitors.

The following were elected Fellows of the Society :—Dr. C. F. Willis, Dr. J. D. Thorburn, Dr. L. M. Sweetman, Dr. I. A. Stone, Dr. W. P. Manton.

The following were proposed for election :—Dr. A. G. Bateman, London; Dr. Samuel Dickey, Belfast.

### *Discussion on Electrolysis.*

Dr. BANTOCK said, Mr. PRESIDENT, If we have regard to the amount of attention that is being given, not only by the profession but also by the public, to the so-called electrolytic treatment of fibroid tumours of the uterus, we cannot but look upon it as a very important matter, and as one that is well worthy of the time that may be devoted to its discussion by this Society. For my part I quite sympathise with the views expressed the other night by Dr. Aveling, and think we ought to avoid, as much as possible, the exhibition of any partisan spirit. In the remarks I have to make, and for which I beg your indulgence, I shall endeavour to confine myself to the strictly scientific aspect of the question, and while I

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shall not hesitate to express my own adverse opinions, giving a reason for the faith that is in me, I am yet prepared to consider dispassionately and without prejudice any evidence of a trustworthy character that may be adduced in support of this method of treatment.

You may remember that I called attention to this question in the valedictory address which I had the honour of delivering before this Society a short time ago. I then stated my views as fully but as concisely as I could, and I am not sorry that I did so ; for, after listening to the very interesting and instructive paper which was read at our last meeting, I felt that I was more than justified in what I then said. I was very much impressed by Dr. Parson's paper, I may say I was very much gratified, not because it tended to knock to pieces the whole fabric that has been so elaborately built up and with such a flourish of trumpets, not because it shewed that this new method of treatment has failed to come up to the expectations formed of it or to furnish evidence in support of the claim that has been set up for it, but because it confirmed the views I had formed after a careful consideration of the evidence hitherto produced in its favour. And I draw this comforting and flattering conclusion that I seemed to know—perhaps divined—more about the subject than I ever gave myself credit for. We do not expect any method of treatment of any disease to be uniformly successful, but we do expect, and have a right to expect, that it will at least show a goodly majority of completely successful results. Here, then, is the point in which this method appears to me to have signally failed.

In the first place, I recall to your minds that I controverted the idea that any electrolytic action was exerted by the galvanic current except in the immediate neighbourhood of the electrodes. I pointed out that this idea pre-supposed or involved an affinity between the neoplasm and the current ; in other words, a peculiar susceptibility of the neoplasm to the action of the current, which had not been proved to exist. And here comes Dr. Parsons admitting the correctness of my

opinions, as a deduction from his experiments devised with the view of elucidating this very question. Dr. Parsons, as I understood him, distinctly contradicts this theory or statement of electrolytic action extending from pole to pole, and was equally positive that it is confined to the immediate neighbourhood of the poles. Were it otherwise I cannot conceive how the matter could have remained so long in doubt, for had the agent possessed this property it would have proved itself of a most destructive character, and it was on the absence of any evidence of such intermediate destruction of tissue as is involved in the idea of electrolysis, that I grounded my opinion as to the baselessness of the whole theory. There is no evidence whatever that even the function—to say nothing of the tissues themselves, as, for instance, of the bladder—has been disturbed by the passing of the galvanic current through that viscus.

In the course of conversation on this subject I have been gravely told that when the galvanic current is passed through a fibroid tumour removed from the body the effect is to change the constitution of the mass so that ultimately there remains only the fibrous framework. Does any one for a moment imagine that the action of the current on the living tissues is the same as that exerted on dead organic matter? Dr. Parsons has told us that that is a delusion, that the statement is not correct even as to dead tissue, that the through action of the current—if there be any at all—can only be very trifling in degree, and that its appreciable action is confined to a very limited area in the immediate neighbourhood of the poles. As far as I understand him, Dr. Parsons even denied the existence of any great or essential difference in the effects produced at the two poles, and in this he is in direct conflict with Apostoli. It appears to be admitted or accepted by all that an acid reaction is produced at the one pole and an alkaline at the other. Further than this Dr. Parsons does not go. The question was asked the other night, What is the nature of the acid thus formed? That is immaterial if the fact itself can be established. A more important question

presents itself to my mind. What is the effect of that acid? There is the stumbling block. It appears to me that conclusions have been hastily drawn which are not warranted by the very few facts obtained. I care nothing about the number of milliamperes said to have been reached. I care nothing about this matter and perhaps know as much, and I leave the experts to settle their differences amongst themselves. Nor do I give any heed to the question whether the external electrode should consist of naked or covered potters' clay, of layers of moist leather, of spongio-piline, or any other substance. All these questions are outside the subject in which we are interested, and are, as it were, only the hem of the garment.

On the other hand, I admitted the local caustic action of the current. I admitted that hæmorrhage might be arrested in cases of so-called granular degeneration of the endometrium—so common in association with fibroid tumours—as the result of the destruction of those granulations by that caustic action. I am prepared to admit that even mucous polypi, such as was to be seen in Dr. Heywood Smith's specimen, and is represented in a more pronounced degree in the illustration which I have passed round, may be destroyed. But I denied, and I am not now prepared to admit, any superiority in this method over others that I named. I will even go further and say that in a case such as is depicted in the drawing I have sent round, it would be much safer to remove the whole of the disease, I mean the mucous polypi, at one sitting, by means of the curette than by the galvanic chemico caustic process frequently repeated. Certainly, it would be more expeditious.

Again, I admitted the production of muscular contractions of the uterus under the influence of the continuous current, and it seems to be more pronounced under the interrupted. Dr. Parsons has told us that this contraction takes place at the interruption of the continuous current, and hence we can readily understand how the contractions are, as is affirmed, more marked under the faradic or interrupted current.



Hence, also, we can accept as matter of fact, the statements of those who tell us that tumours are seen to become appreciably smaller under the influence of the current. When we recall the appearance of Dr. R. T. Smith's specimen, with its enormously hypertrophied uterine walls, we can accept the statement as at least very probable from the nature of the tissues, and even as the expression of a fact on the testimony of the observer. But Dr. Smith told us that although this contraction was even observed by him, it proved to be of a very temporary character, that it failed to arrest the hæmorrhage or permanently diminish the size of the tumour, and that ultimately he was compelled to resort to the last extremity by removing the whole mass. Now it appears to me that this was a most suitable case for the galvanic method, with the powerful muscular envelope by means of which to cut off the blood supply through tetanic spasm, and the encapsuled arrangement of the tumour with its feeble vascular connections, a condition I have frequently observed. Hence its failure in this instance is only the more conspicuous. Nor was there any evidence that the tumour had undergone any change in the way of electrolysis. It is inconceivable that the current could induce any contractions in the tumour itself, for it did not possess the necessary elements. It was an example of the hard nodular tumour in which the fibrous element predominated. But assuming, or admitting as a fact, this muscular contraction, what else is it than that which we seek to produce by the administration of the ergot of rye? We have had in Dr. Smith's case an example of this action by means of the galvanic current. Let me give you one illustrating the action of the ergot of rye. I select this one not because it is the most striking though a very striking example, but because it is the most recent. On the 1st February last, I visited a lady, about forty-four years old, who came from the north of England to consult me on account of severe menorrhagia. Her appearance at once denoted severe hæmorrhage in her blanched condition. This was confirmed by a well marked hæmic murmur and by a feeble and rapid

pulse of over 120, and was explained by a history of the great loss of blood she had been undergoing. The periods were excessive both in quantity and duration, extending over ten days, and with about the same interval. She had, moreover, a more or less constant discharge, of a brownish character, in the intervals. All this had been going on for several months unchecked by the treatment to which she had been subjected, I omit what I said to the patient about the removal of the appendages with her objections thereto, I content myself with saying that the uterus was as large as a small cocoanut from the presence of some small fibroids to which the menorrhagia was attributable, and I come to the main fact that I gave her twenty minims of the liquid extract of ergot along with ten minims of the muriated tincture of iron three times a day. The effect of this was to remove the blanched appearance of the patient, to diminish almost to extinction the *bruit de diable*, to bring down the pulse to something between 70 and 80, to arrest the intercurrent discharge, to protract the next interval to over four weeks, and to reduce the flow to a much more moderate quantity and limited in its duration to about six days. And the total result was that the patient had improved so much that she was able to return home on the 14th of this month. All this was accomplished in six weeks. Can the advocates of the electric treatment show anything better than that? or even so good? And this is not a solitary example. It would be easy to multiply cases. One especially I might refer to in the instance of the wife of a medical man in whose case the question of the electric treatment was actually discussed. When I last saw this patient, some weeks ago, she called upon me for the purpose of telling me that she was quite well. A statement which her robust appearance confirmed. And yet she was a diabetic. But I will not weary you with further details of this kind.

I now come to a very important fact, viz., that up to a recent date the advocates of this method were unable to point to a single instance, in which the tumour had disappeared,

and I know not whether they can do so even now. At the meeting of the American Gynæcological Society held in New York, in September last, I heard the question pointedly put to Dr. Apostoli, "Have you ever seen a tumour disappear under your treatment? The answer was "I have not." All he could claim was an amelioration of symptoms. Up to that date he had not practised his new method, but had relied on that electrolytic action which I have shown has not been proved.

Now, I think you will agree with me that it is a sure sign of a failing cause when one shifts his ground in self-defence. This is what Apostoli and his apostles have done. They have recognised the inefficiency of the former method and they have been obliged to have recourse to another method which is of a totally different character, they have been compelled, in military phraseology, to take up a fresh position. You know what that usually means. What, then, is this new method? It is that of thrusting one of the electrodes into the substance of the tumour itself. But still they cling to their theory of electrolytic action. I can see nothing in it, and herein I am supported by Dr. Parsons. I say I can see nothing in it, but a local caustic action with the necessary destruction of the integrity of the tumour. This at once reminds me of the late Dr. Greenhalgh's method of thrusting a red hot iron, or actual cautery, into the substance of a fibroid tumour through the vagina. This was done by Dr. Greehalgh in several instances, and I believe by some others, but the results were so unsatisfactory, and so largely though not uniformly disastrous, that the method was soon consigned to the limbo of good intentions ending in bad actions. That method is now well nigh forgotten, as it well deserved to be. Now this was only a major degree of what is now practised. There is no essential difference in the principle of the two methods. They both seek to bring about the destruction of the integrity of the tumour, and the practice may be said to be founded on what is now a well known fact, viz., that if you can once start the degenerative process in a fibroid tumour,



either the active and dangerous process of sloughing or the more gradual and innocent process of absorption, that process will go on till the tumour is ultimately got rid of. I admit that this can be done, and that it has been done. But who can control the process and keep it within the bounds of safety? Who can direct it into the beneficent channel of simple absorption, or away from the dangerous channel of cystiform degeneration, or the still more dangerous one of sloughing? I admit the possibility of getting rid of tumours in this way, but I deny the safety of the method claimed for it by its advocates, and I call to witness Dr. Holland's cases and others with which rumour is busy.

There is another very important point. We are told that under this treatment tumours get smaller, but do not disappear. Does not this strike you as a very remarkable statement, after what I have just been saying? I have called your attention to the well-known fact that if you once start the degenerative process in a fibroid tumour, that process does not stop till it is complete, and not a vestige of the tumour remains. Of course, I assume that the patient survives. But it is the tumour—properly so called—that gets smaller? There is no evidence to prove that this is so. I believe—and all the evidence goes to show—that the change takes place in the hypertrophied walls of the uterus, and I have this belief on the evidence furnished by a case which came under my observation seven years ago. I removed the appendages of a patient æt. thirty-nine, who was the subject of an intra-mural fibroid, accompanied with severe menorrhagia. For more than a week after the operation, there was very free metrostaxis. Within three weeks the most marked change had taken place in the size of the mass, for it had already diminished to nearly one half; but within two months the mass was as large as ever. In the meantime menstruation returned, at first to a moderate amount, but it was not long ere it regained its former proportions, and the result was that after a lapse of three years, I was compelled to perform supra-vaginal hysterectomy. The explanation of this strange freak was found in the great hyper-

trophy of the uterine walls, which admitted of such a marked reduction of the mass under the influence of powerful muscular contractions, with a temporarily diminished supply of blood. The conditions were very similar to those seen in Dr. R. T. Smith's specimen. My case, then, was an example of failure of the operation of removing the appendages, because, as I now think, it was not a suitable one for the operation. His was an example of failure of the galvanic current, in a case apparently suitable, and without even the fleeting promise of success which mine afforded.

But, further, when we compare the general results of the two methods, we find a marked difference. The electricians can only claim a diminution of the size of the tumour, of a very problematical character. We surgeons, claim a total disappearance. In my valedictory address, I quoted my first case in which the tumour wholly disappeared after the removal of only one ovary. In March last I removed the appendages in two cases. In the one the patient was very much blanched, and had suffered much of many physicians for ten weary years. The uterus, with its multiple fibroids, filled the pelvis from side to side, and the left tube presented the appearance of a piece of distended intestine. In the other I had watched the gradual growth of the tumour through a period of about eighteen months, from the size of a pigeon's egg to that of a large orange, or swan's egg, together with the gradual increase of menstruation and impairment of health, in spite of treatment. In both cases menstruation was completely arrested by the operation, and they both recovered their health. I saw these two patients, the one on the 23rd, and the other on the 24th January last. In both, the tumours had almost entirely disappeared. Another patient, from whom I removed the appendages together with an outgrowth from the fundus, by incision of the capsule and enucleation, but leaving several small fibroids in the body of the uterus, presented herself on the 14th of this month, after a lapse of twenty and a-half months. In this case I found that the tumours had absolutely disappeared, while the uterus itself had passed into the stage of complete or senile atrophy.

Here, then, we have indisputable evidence of the most positive kind as to the value of this method of treatment, and the cases I have quoted go to prove what I have stated, viz., that if you once start the degenerative process in a fibroid tumour, that process goes on to complete disappearance of the tumour. On the other hand, there is no evidence of anything of this kind [taking place in those cases in which the tumour is said to become smaller under the galvanic treatment; *without puncture of the tumour itself*.

There is another matter that should not be overlooked. In a recently published letter, Skene Keith stated that he and his father had made as many as 2,567 applications of the galvanic treatment for fibroid and other diseases of the uterus, up to the first week of this month. This gives, with something between eighty and ninety cases, an average of thirty applications for each case. But he does not tell us that he has caused the disappearance of a single tumour, and so far appearances are not very brilliant. However, he promises us a report on this subject, which I shall await with interest.

But, sir, unfortunately there is a moral side to this question. You know that this mode of treatment has already become the fashion of the day, and experience tells you that as such, it is only too apt to degenerate into quackery,—in this instance a quackery of the very worst kind, for it is one for which the profession is responsible. One cannot help feeling that it has even now assumed this character when we hear of one practitioner of some eminence charging fifteen guineas for the first application, and I know not how much besides. And when we read the list of the various and opposite diseases for which it is recommended—such as subinvolution and superinvolution, amenorrhoea and menorrhagia, and so on—we are forcibly reminded of the vaunted virtues of some quack medicines, such as Holloway's or Cockle's, Norton's Camomile, or Widow Welch's Windpills.

So far, then, as I am concerned, the case stands thus. I have no confidence in the value of this method; I fail to find evidence sufficient to convince me of its utility, at least to the



extent claimed for it by its advocates. While I stand on one side I am content to allow others to follow it up so long as they do so in a scientific spirit, free from mercenary considerations, and when they shall have failed I shall be prepared to take the patients off their hands for the purpose of performing hysterectomy or removing the appendages *in suitable cases*—provided the chances of success have not been imperilled—for I believe these operations will not be done away with, nor we surgeons find that, like Othello, our “occupation’s gone.”

Dr. ROUTH said he agreed that quackery was a thing to be avoided in connection with any method of treatment. Now, it might be true that no actual chemical disintegration took place, except in the immediate neighbourhood of the electrodes. But it was not true that subsequent absorption beyond did not occur. All that was needed was a beginning of the disintegration of the new tissue—and then, because (perhaps among other reasons of the lower vitality of the new growth), once the process of absorption had begun, it necessarily extended to the whole tumour. Therefore it was not necessary to destroy the whole tumour at once. He had already narrated a case in which a tumour, partly intra-uterine and partly mural, as big as his head, was absorbed nearly entirely in four days, when he had removed a portion with the ecraseur. This had been verified by the post mortem, as owing to insufficient use of antiseptics in days gone by, the patient had succumbed. He had seen one or two cases operated upon by Dr. Greenhalgh with the red hot iron, passed through the vagina into the tumour, and these were not followed by the fatal results mentioned by Dr. Bantock. The iron was at first applied carefully and *superficially*, till adhesion had taken place between the internal opposite portions of Douglas’s space, and then, after three or four days the red hot iron was pushed deeper, and the tumour wounded. In this way no poisoning occurred in the peritoneum, and absorption once set up proceeded rapidly to a cure. Mr. Baker Brown had adopted a plan of using a sort of large corkscrew gimblet, which he passed through the tumour, and then, filling up the hole thus made

with cotton, inflammation was set up, and absorption followed. Mr. Brown had not, however, adopted Dr. Greenhalgh's preliminary step to cause adhesion between the opposed surfaces of Douglas's space. He had thus some very unfortunate results of fatal peritonitis; but even he, by this plan, obtained some considerable success. In those days they knew very little of antisepsis, and that was why some cases went wrong. He maintained that in quoting those cases they were speaking of a state of things which no longer obtained, and therefore had no exact relation to the subject they were discussing. He asked Dr. Bantock how he knew that the cases he treated so successfully with ergot, were fibroids at all, and not merely cases of uninvolvement, or cases, it might be, of intra-uterine tumours. He (Dr. Routh) had obtained very good results, specially in uninvoluted cases with the electrical current. But it seemed to him that Dr. Bantock was arguing as if in every case of uterine tumour electricity was to be used. But surely no man of any knowledge of uterine tumours or enlargements would think of advocating electrolysis for polypi, and he had never heard of removing interstitial fibroids with the curette. Referring to the reproach made against the electrical treatment that it did not remove the whole of the tumour, he said that it was true that this could only be done by hysterectomy, but then only at the risk of the patient's life, and certainly by completely unsexing her, and again there were many cases in which, even after abdominal section, it was found impossible to remove the tumour. Such cases might be called explorative operations to cover the failures, but failures they were, and immensely increased the chances of a fatal result. Then it was possible to do a large amount of good without destroying the entire tumour. If its size could be greatly diminished and hæmorrhage arrested, and strength improved, and sex and health preserved, was this not giving a woman very great comfort and happiness. But Dr. Bantock had another operation in reserve, which he believed far superior to electricity, not only in arresting hæmorrhage, but also in leading to the entire absorption and disappearance of the tumour.

This was removal of the appendages, but they had it on the authority of Mr. Lawson Tait that in some cases this operation failed. True, he said it was because he had not in these instances cut away enough of the tubes. But this arrest of hæmorrhage could be equally brought about by electrolysis, and this without danger to life, or unsexing the woman. *Not* if a *thin* sound was used which could only touch one side of the uterine mucous membrane, but by a good broad one, made of platinum, and conveying the positive or hæmostatic current. Dr. Routh then proceeded to state that it must be admitted that electrolysis would not cure any and every case of fibroids, some were more amenable to its action than others. In his own experience, fibroids of *recent* formation readily yielded and underwent resolution. Fibroids of an older date, perhaps of several years, resisted electricity most, but even these sometimes absorbed away beyond expectation. Fibroids involving the whole organ, like the enlargement from subinvolution, were also well treated by electrolysis. Nobody would think of treating extra-uterine fibroids in this way, nor intra-uterine tumours. Interstitial fibroids were those most likely to be benefited. But the diagnosis should be accurately made. It was necessary to distinguish between the cases that would, and those that would not, be likely to derive benefit from this particular treatment. For instance, Mr. Reeve's fibroid case, was one, perhaps, where diagnosis during life was impossible, but the post-mortem preparation before them proving it was extra-uterine and strangulated within the pelvis, pointed out that it was a case for abdominal section and not electricity at all, especially as Dr. Greenhalgh's preliminary preparative operation had also been omitted in the case. Certainly in cases of subinvolution he differed from Dr. Bantock, who said that they could not reduce them (Dr. Bantock : "I said nothing of the kind!") He claimed that, on the contrary, the sub-involuted uterus rapidly diminished in size. He saw nothing ridiculous in the fact that the treatment was recommended in such different disorders as amenorrhœa and menorrhagia. This opinion was founded on the supposition that both



electrodes acted in the same manner; but the reverse was the case. The positive pole was hæmostatic. The negative would often induce the menses in cases where they had been absent for months, and these two opposite results were incontrovertibly proved. Lastly, there was one source of fallacy in Dr. Bantock's alleged success in his cases, where he removed the tubes or had given ergot. He had omitted to give their ages, and so they were left in doubt as to how much of the success was due to the menopause, and how much to the treatment.

Dr. HEYWOOD SMITH said that he little expected, when he brought the tumour before the Society three months ago, that it would be the text for a discussion on treatment by electricity. He said that they must not allow themselves to be carried away by their feelings, either to praise it unduly or to cry it down. He came there to learn from those who had more experience of the treatment, and looked to them for guidance in applying the treatment to patients. Referring to the experiments related by Dr. Parsons, he regretted that sections had not been produced for examination, seeing that the whole question turned upon the effect produced by the current. They wanted to know whether the electrode acted as a destructor analogous to the cautery, and whether the tumour could be shelled out with the same risk as in other methods of enucleation, or whether there was decomposition or disintegration leading to absorption. He said that fibroids were exogenous and not endogenous growths, starting from a central point which was the original degeneration of tissue. They were therefore buried in the contractile tissue of the uterus, and it was to the external ring that they had to look for the source of absorption. He asked if the electrodes were introduced into the centre of the mass, how absorption was to take place. They wanted it demonstrated to them by measurements, how the tumour actually disappeared and in what time, and accompanied, if possible, by sections. His object was to put the discussion in a definite form, for so far he did not think that any positive, reliable information had been forthcoming as to how electrolysis acted.

Dr. BURFORD read the notes of the case of a single woman, 45 years of age.

S. S., aged 41, had menstruated since 14, periods fairly regular, loss always scant. Admitted into hospital on December 15, with history of pain in hypogastrium and back for fifteen months, also sickness, frequent of late. Swelling in abdomen noticed eight months ago: pain worse in region of swelling.

Sound passed  $3\frac{1}{2}$  inches backward, tumour, solid uterine and occupying hypogastrium. Electrolysis commenced on December 22nd, and continued for four sittings up to January 9th, when the tumour became less pelvic and more abdominal; currents hitherto averaging 60-80 ma. From January 12th to January 30th four further sittings for electrolysis were concluded, with current strengths from 80 to 110 ma. After January 30th electrolysis was discontinued, as no perceptible difference in the fibroid was apparent, and the application of the current was becoming more and more intolerable by the patient, vomiting and much pelvic pain resulting from each electrolysis.

During February patient had two attacks of violent sickness with increased pain in abdomen, and early in March, a third one of great severity, lasting nearly a week, and evidently accompanied by local peritonitis. Her condition becoming steadily worse, Mr. Reeves performed hysterectomy on March 22nd. The uterus showed multiple fibroids, specially a very large sub-peritoneal one, with an attenuated but twisted pedicle. This tumour evidenced recent retrograde changes, being dark and extremely congested on section. It was impacted in the pelvis, being drawn out with difficulty, and recent acute peritonitis involving the intestines in its locality was evident. Both ovaries and adjacent portions of tubes were removed at same time.

Mr. REEVES said that this case had been intended to suggest a new procedure in operating, but he would leave that point to a future occasion. He said they could not always be clear as to the nature of a fibroid tumour which might turn

out to be sub-serous. He thought that the electrical treatment, when unsuccessful, might lead to the loss of valuable time. In that case he had removed the tumour after two attacks of peritonitis, and he thought the patient might have recovered had he operated in the first instance. The tumour in question was pedunculated and impacted in the pelvis. The pedicle was twisted. He had no jealousy in the matter. He was quite prepared to give a fair trial to any new method of treatment. It ought not to be condemned off hand, and they certainly ought not to attempt to fill their pockets over a thing of which they were not sure. They could not forget that hysterectomy was a very dangerous operation, and for that reason they ought to give the electrical treatment fair play.

Dr. IMLACH said that on the table before them were three specimens which illustrated the three methods of dealing with myoma of the uterus. One was an enormous multiple myoma removed by hysterectomy. The second was a myoma treated by electrolysis with a fatal result; it was engorged with blood and resembled spleen pulp, he had never before seen such a condition and doubted if any member had. The third specimen consisted in a pair of fallopian tubes distended with pus, which he had removed from a patient with a myoma rising as high as the umbilicus and filling the lower abdomen. Surely it would be dangerous to treat such a case by electrolysis, and tubal disease was a common complication of bleeding myoma confined within the pelvic cavity. The positive galvanic pole was of excellent service in closing a sinus, but it would not produce more than temporary obliteration of the uterine cavity. Of the effect of frequent electro-puncture with the negative pole he had as yet little experience. It did not, and was not intended to cause muscular contraction, and its action at a distance had received no explanation.

Dr. FANCOURT BARNES said he had had two cases in his wards at Chelsea treated by this method. In the first case there was a fibroid tumour reaching nearly up to the umbilicus. After many weeks of suffering, during part of which the



patient was at death's door, the tumour disappeared and she left the hospital. The second case was one which had been to him two years previously with a fibroid reaching nearly to the umbilicus. She was then told that nothing could be done as she was not suffering very much at the time. About a month ago she returned to the hospital saying she wished to be treated by the "new cure." Her wish was acceded to and the treatment was at once begun. After a few applications she became very ill and was in great pain and had left the hospital a day or two since, against his wish. So far as he could make out an abscess was forming in her left groin and she declined further treatment, but he had to state that the tumour was much—a third, smaller. If he compared the results of the removal of the appendages where a tumour at least as large had disappeared in six weeks without a rise of temperature, he should be disposed to continue this method of treatment in preference to the other. Dr. Routh had asked whether the uterus was injected after operation, with a view of preventing septic changes. Although he was told that the septic symptoms in the first case would not have happened if the method had been properly carried out, he could not, for his own part, understand how antiseptic precautions, in the strict sense of the term, could be used.

Dr. AVELING said that the cases brought before the Society, by Dr. Fancourt Barnes, were quite useless, and had better have been left to a later stage, no details having been supplied as to strength of current, &c. He observed that the opposition to the treatment came from those gentlemen who had paid especial attention to abdominal sections, and their remarks, generally speaking, were not based upon any practical knowledge of the method, but merely upon what they had heard and read. They said it was dangerous, but he maintained that it was only true when employed by ignorant or impatient people. The operator must possess some knowledge of gynæcology and of electricity, at any rate enough to enable him to use galvano-puncture safely. He deprecated the tone of many of the arguments used against the system,

such as calling these instruments toys, or, as Dr. Bantock had done, imputing unworthy motives to those who were trying electricity. Dr. Bantock said, too, that it was a means of attaining notoriety, but for his own part he denied the justice of such a remark. It was not by using abuse and calling them quacks that they would aid in settling the question. In favour of the system they had the testimony of several reliable medical men. There were Englemann and Cutter in America, Apostoli in France, and Keith in Edinburgh—representative men, men of position, whose opinions were bound to command attention. He asked why Dr. Bantock and others performed hysterectomy—was it not because patients came to them with urgent symptoms of pain, hæmorrhage and bulk of tumour? It was just these three things that electricity would relieve, and if a patient could be thus symptomatically cured, was it not worth trying, instead of making the patient run the risk of her life? He quoted Keith's remarks on the subject, and Keith could not be called a coward, nor did he shirk difficult cases. Keith said, "I say deliberately that hysterectomy is an operation that has done more harm than good, and its mortality is out of all proportion to the benefits received from the few. So strongly do I now feel on the subject that I would consider myself guilty of a criminal act, were I to advise my patient to run the risk of her life before giving a fair trial to this treatment, even if I were sure the mortality would not be greater than that which hysterectomy has given me in my private cases—under four per cent." Turning to the question of electrolysis, they trod on theoretical ground, but it was after all a matter of experience. If theory and practice did not accord, so much the worse for the theory. He did not agree that there was no electrolytic action between the poles. It would be contravening one of the laws laid down by Faraday that the action of the electrical current was the same at every point of that current. They had, first of all, the caustic action of the electrode, there was also a splitting up of the tissue by the formation of the hydrogen. Finally, there was the true inter-polar action, the migration of the ions from one

pole to another. That action was unmistakeable, and he thought that experiments to prove the contrary were and must be failures.

Dr. MANSELL MOULLIN had anticipated that Dr. Parsons would have been prepared with a long array of cases to prove the benefit that was to be derived from the treatment. But on the contrary, nothing could demonstrate more clearly the futility of the whole proceeding than the most masterly paper he had read before the Society at the previous meeting.

He did not think it was generally understood that electrolysis meant destruction. The word itself had that signification. It was impossible for electrolysis to take place in living tissue. There was no such thing as a modified electrolytic action at a distance from and between the poles. Supposing, for the sake of argument, that this action did take place, how was it that the current picked out the morbid tissues only. Dr. Parson's had advanced a theory that it was in consequence of the lower vitality and smaller recuperative power of the morbid cell growth which was influenced in some way by the current. It was impossible to accept such a theory, unsupported as it was, by any evidence whatever. Electrolysis took place at the surface of the poles only, and the amount of tissue which could be thus destroyed with a current such as the patient could endure must certainly be infinitesimal. It was a matter of experience that the tumour, under the influence of the current, became very hard and diminished in size for some hours. This could be due only to the contraction of the muscular elements in the uterus, in the capsule of the tumour and in the tumour itself. Dr. Parsons' experiment on the web of the frog's foot, showing that the contractions took place only at the make and break of the current did not prove much. All muscular tissue did not contract alike. The *latent* period, the time that elapsed before the muscle contracted after receiving the shock, was in lowly organised muscle of extraordinary length, and the persistence of the contraction in such cases proportionately long. Even the striped fibres in a tortoise would remain contracted for

nearly an hour. In unstriped muscular fibre the contraction would persist for a much longer period than that. There was nothing surprising in the fact that the ill-formed, ill-developed muscle cells in a uterine fibroid should remain contracted for many hours. Although treatment by electricity had been actively taken up in many quarters, not a single instance had been brought before the Society in which any permanent benefit had been the result. On the contrary, there were several cases now before them, exemplifying the dangers which might arise from the treatment. One case only had had an apparently successful issue; a case reported in full in the last number of the Society's transactions. A large submucous fibroid underwent necrosis as a result of the treatment, and was partially extruded by the tonic contractions of the uterus; enucleation accomplished the rest, and the patient had made a good recovery. A similar case in the hands of the same operator had, since then, not been equally successful. At the previous meeting Dr. R. T. Smith had exhibited a soft interstitial fibroid accompanied by hæmorrhage, which had not been benefited by the treatment. Hysterectomy had been subsequently performed with good results. A fourth case had just been exhibited by Mr. Reeves, in which the tumour was found to be subserous and pediculated, and in a sloughing condition. In two out of these four cases sloughing of the tumour had occurred. He had drawn attention to the danger arising from this source on a previous occasion, but had not anticipated seeing the truth of his remarks exemplified so soon. He thought they might safely draw the conclusions from a comparison of these four cases, that the result was not induced by what is known as electrolysis. Secondly, these cases proved that the electric battery was by no means a toy, but that it might under certain circumstances cause great harm, and lastly, that having regard to the difficulty of diagnosis, it being in many cases impossible to define the character and position of the fibroid, the treatment was essentially empirical.

Dr. BURFORD rose to say that some protest should be entered against the indiscriminate insertion of an unprotected



metal rod, with currents of high intensity, inside the uterus. When they considered what the effect would be upon the hard, leathery epidermis, that is to say, sloughing, hyperæmia, &c., it was not altogether unfair to anticipate that something of the kind would take place inside the uterus. He had seen three cases of septicæmia in which the patients nearly died, evidently due to the retention of secretions and shreds of tissue broken down, in consequence of the galvano-caustic action of the electrode. Only a fortnight before he witnessed the expulsion of the entire cast of the lining mucous membrane of the uterus, which had been in process of discharge for some days. He also saw a detached slough of mucous membrane about the size of a shilling, from the cervical canal evidently touched by the pole. Lastly, he had on one occasion had the misfortune to cause a slough half-an-inch deep where the electrode had been applied, and this was around the portio vaginalis, with a current strength of 75 ma.

Some discussion took place as to the propriety of continuing or adjourning the discussion. Taking the sense of the Society, the PRESIDENT called upon Dr. Parsons to reply.

Dr. PARSONS, in reply, challenged Dr. Aveling to prove his assertion as to an electrical action between the poles. He quoted an experiment by Faraday with three glasses, but he could find no evidence of electrolysis. The iodine passed right through the central glass containing solution of starch without discolouring it. Dr. Bantock had spoken of results, but time alone could furnish them with these. He said that because he (Dr. Parsons) had proved that there was no electrolysis between the poles, therefore there was no beneficial action; but although there was no electrolysis, a transport of elements took place. It stood to reason that when this took place through living tissues, it would have some effect upon the vitality of its cells. Dr. Bantock suggested that there would be some effect upon the bladder. In some cases of his the bladder was so affected, but only tem-

porarily. That was explained upon the hypothesis that normal tissues were better able to recuperate than those of tumours. He objected to any argument being based upon the alleged passage of a current of 800 milliamperes, for he did not believe it was possible, in which view he was seconded by Dr. Steavenson. He had not the temerity to accuse surgeons of being afraid lest they should cut them out of a lot of their practice. With respect to amenorrhœa Dr. Bantock had spoken rather slightly. He hoped to publish some cases shortly ; in the meantime he could say that he had been successful with cases which had resisted the usual treatment. A current of 250 milliamperes would soon produce the desired effect. He had had a series of cases in which it had proved uniformly successful. His own practice was certainly not to pass a needle into the centre of the tumour, but into the periphery where the blood supply was largest, and where absorption could take place. The case brought forward by Mr. Reeves had no practical application. The current was not strong enough nor applied often enough, nothing under 200 milliamperes being of much use. (Mr. Reeves interrupted the speaker to inform him that even the current used was followed by so much pain and suffering that they were afraid to go further). He had had a similar case of extreme susceptibility, but they were rare. Dr. Imlach said that he thought many cases of myoma were associated with pyo-salpinx, but he did not think that this would be agreed to. (Dr. Imlach pointed out that his remarks only applied to tumours impacted within the pelvis). He used the positive pole when there was hæmorrhage, but only then. In the case alluded to by Dr. Fancourt Barnes, in which he said he thought it had given rise to an abscess, the temperature never rose above 100.5° F. The patient was a neurotic and anæmic woman, and had not had any application of electricity for some time before leaving, on account of menstruation. She was well enough, when she left, to take a long railway journey. They always had a certain amount of exhaustion. Dr. Aveling had spoken of tissues being broken up by the hydrogen gas, but his own experience of the action

of hydrogen went against that view. He observed that if a powerful battery were used without a rheostat, a muscular contraction might be caused in passing from one strength to another, and he did not think for a moment that the contraction of the tumours was due to the contraction of their muscular fibres. It was not proved, at any rate.

The Society then adjourned.

*THE BRITISH GYNÆCOLOGICAL SOCIETY.*

WEDNESDAY, APRIL 11, 1888.

ARTHUR W. EDIS, M.D., F.R.C.P., PRESIDENT, IN THE CHAIR.

PRESENT : 25 Fellows, 2 Visitors.

The following were elected Fellows of the Society :—Dr. S. Dickey, Dr. A. G. Bateman.

The following were proposed for election :—Dr. John James Pitcairn, Uckfield, Dr. John Moir, London.

Books were presented to the library by Dr. FANCOURT BARNES.

*A Case in which Ruptured Tubal Pregnancy occurred twice in the same Patient.* By LAWSON TAIT, F.R.C.S. Professor of Gynæcology in Queen's College, Birmingham.

ON the 10th of May, 1885, Mrs. E. R., age 25, was sent to me by Mr. W. P. Whitcombe, Victoria Road, Aston, suffering from urgent abdominal symptoms.

The history was to the effect that she had been ailing from a short time before Christmas, but had gone on to now. She thought it was due to pregnancy. Menstruation had been suspended for three months. In April she had a period, and again early in May, and at the latter time she complained of violent pains in the lower abdomen, and on the 9th she had an attack of faintness with vomiting, the pain being referred to the lower abdomen. When I saw her she looked extremely ill and anæmic. A large ill-defined mass existed on the right side of the uterus, intimately associated with the organ and the roof of the pelvis was fixed. There was no difficulty in



diagnosing the case to be one of ruptured tubal pregnancy I opened the abdomen on the 11th and found the belly full of blood-clots and bloody serum. I removed the right fallopian tube, which was occupied by a pregnancy of about the third month, and in its walls a large rent had occurred through which the fœtus and placenta were partly protruding. Some points of bleeding of the peritoneal surface of the intestines required touching with perchloride of iron. I inserted a drainage tube and the patient made an easy and rapid recovery. The case is published in a short paper on Ruptured Tubal Pregnancy in the *British Medical Journal*, December 19th, 1885.

About eighteen months after this operation she was confined of a child at the full term, being attended by a midwife and there being nothing remarkable about the labour.

About fifteen months after this confinement she again became pregnant, and her husband states that during the period of this pregnancy, which she thought had turned four months, she had no symptoms of note but only complained at intervals of slight pains in the abdomen, but not sufficiently severe to induce her to call in medical assistance. The only point on which he lays any stress was that she stated that she felt the child very plainly, more so, it seemed to her, than at the same period in any previous pregnancy. Dr. Whitcombe was sent for to see her in the forenoon of the 9th of March, but he being from home the patient was seen by his assistant shortly before one o'clock on that day.

She was lying fully dressed on the bed, her knees drawn up, and was complaining of great pain in the hypogastrium. She was extremely pale and almost pulseless, and had some vomiting. Mr. Hall was informed that only half-an-hour before she had been cleaning her fireplace, and in the act of stooping was seized with acute pain and a feeling of faintness. Stimulants were at once administered, and every effort made to restore her without any avail, and the patient died shortly after five o'clock, clearly from internal hæmorrhage. Mr. Whitcombe made a post-mortem, and has been kind

enough to give me the following particulars: He found the abdomen full of blood clots and fluid blood. A large clot was adherent to a portion of the placenta, which protruded from the uterine wall, and when this clot was separated it had a quantity of villous placental tissue adherent to it.

All the organs were very anæmic, and there could be no doubt that the hæmorrhage was the cause of death. Mr. Whitcombe was good enough to bring me the preparation, and aided by my assistant, Mr. Leichmann, I am enabled to give the following report of the appearances presented.

There can be no doubt that the specimen represents an interstitial tubal pregnancy of the left side. The cavity in which the foetus is situated is separated from the true uterine cavity by a strong septum of uterine tissue springing from each side of the uterine walls. The under surface of this septum and the rest of the uterine cavity is lined by hypertrophied mucous membrane (decidua). The stump of the right Fallopian tube is attached to what appears to be the lower angle of the uterus, but which is really the much displaced upper angle. This displacement, however, is only apparent and arises from the enormous development of the left cornu of the uterus. A fine probe may be passed from the true uterine cavity into this stump. The left Fallopian tube, on the contrary, communicates with the cavity in which the foetus and placenta lie, and the rupture has taken place in the upper and back part of the left uterine cornu. In this case we have the almost incredibly strange instance of a woman suffering twice from tubal pregnancy, with the still stranger fact of her having a normal pregnancy between the two occurrences. From the first of her disasters she was saved by prompt surgical interference, and she might even have been saved the second time, but there can be no doubt that the poor woman's doom was sealed before medical assistance reached her, and there was no time then to effect the interference which was necessary. All the appearances of the preparation point to the fact that the woman's estimate of the period of her pregnancy was correct, and we have therefore an

indication that the interstitial form of pregnancy does, as we might have expected would be the case, take a longer time to arrive at the period of primary rupture than do those cases in which the pregnancy occupies the free part of the tube. In this latter we have no evidence as yet of any instance going beyond the twelfth or thirteenth week before primary rupture. It may be noticed here I am introducing a new phrase in the term "primary rupture"; and I do so because I am becoming convinced that unless we make such a distinction as I am about to indicate, we shall perpetuate some of the elements of confusion which exist about this interesting displacement. It is perfectly clear that in all cases of tubal pregnancy when the ovum is growing the tube must burst, and that it bursts in two directions, either into the peritoneal cavity or into the cavity of the broad ligament. In the free part of the tube this rupture takes place, as I have said, about the twelfth or thirteenth week.

In the interstitial form, the case before us shews that the rupture may be deferred to a later date. The primary rupture into the peritoneal cavity seems to be almost necessarily fatal alike to mother and child; but when the rupture occurs into the cavity of the broad ligament it may be followed by a continuance of the development of the child, and these only are the cases in which the child is permitted to reach a viable period. In a recent number of the *American Journal* a case is reported by Dr. ———, as being a case in which no rupture had taken place. But the description given makes it perfectly certain that this was a case where the rupture had taken place into the cavity of the broad ligament.

In this group of cases a secondary rupture at any period is possible, and therefore it is that the adoption of the terms, used strictly to indicate relative dates, will become very useful. This secondary rupture was most clearly demonstrated in Nonat's celebrated case as given by Bernutz, a case which on account of the occurrence of this secondary rupture is full of the greatest interest (see my Ingleby lectures, 1887). This secondary rupture probably also explains such an occurrence as that in Jessop's case.

Connected with the case which I am now discussing there are many important points worth noticing, some of which are new, and others though quite familiar, are worth noticing on account of the confusion which still seems to exist in the mind of the most recent writers on this subject.

The patient was rather an intelligent woman for her class, and, having undergone the terrible experience involving her first operation had obtained a fairly full knowledge of the nature of the accident and its consequences. Yet with this dreadful experience, and the knowledge of it, when the same condition recurred, so little did she suffer that up to the moment of rupture (knowing she was pregnant) she never thought of asking for medical assistance, and this was the case also in her first tubal pregnancy. There were no symptoms whatever to draw attention to her state until the rupture occurred, indeed there were no symptoms even calling for examination. The strangest thing of all to me is, that in the enormous experience I have now had of tubal pregnancy, I have never but once been called upon even to make an examination until the rupture had occurred, and in that case there was neither history nor symptoms which enabled me to do more than determine that there was tubal occlusion.

Not indeed until the rupture occurred, and the abdomen was opened, was a diagnosis possible. Under these circumstances I think I may be excused, maintaining a somewhat sceptical attitude concerning the correctness of the diagnoses of those gentlemen who speak so confidently of making certain diagnoses in cases of tubal pregnancy before the period of rupture, and who speak with equal confidence of curing the cases by a puncture either simple, medicated or electrolytic. Upon these points I have been much misrepresented, and am glad to have an opportunity of clearly stating my views, but I wish to say that after the period of rupture a diagnosis can be, and has, in my own experience, been made correctly in the majority of instances. The great bulk of the utterances in these directions may stand very well in Society discussions,



or in library papers, but they will not stand the test of bedside experience.

Another point in connection with this interesting case is the fact made abundantly clear by the preparation that no matter what the symptoms had been previous to rupture, physical examination could not have permitted any diagnosis other than that of normal pregnancy of about  $4\frac{1}{2}$  months.

This is my solitary experience of interstitial tubal pregnancy, but it so closely resembles a number which I have seen in museums that I take it to be quite typical of its class. I am therefore disposed to believe that from physical examination interstitial tubal pregnancy could not be diagnosed, and I can imagine no symptoms which would help us to recognise it before rupture. If we were to assume that in such a case as this a diagnosis could be made, much ingenious speculation may be engaged in as to what would have been best to do for the patient. If a correct estimate of the relation of parts could have been made, clearly what ought to have been done was to dilate the cervix, divide the septum freely, and empty the cornual cavity.

To have attempted to destroy the child would not have benefited the patient one bit. The placenta would have gone on growing, and even if it had not, a bag of putrescible material would have been left, which, had it burst, must have burst into the peritoneal cavity.

At the time of rupture, if surgical assistance could have reached the woman with sufficient promptitude she might have been saved by a hysterectomy, and from the appearances at the p.m. there is no doubt that this could have been easily accomplished.

Dr. HEYWOOD SMITH said that in this case, judging from the condition of the uterus, it would have been impossible to secure only the cornu of the uterus. The question arose as to whether it would not have been the best plan to remove the whole supra-vaginal portion of the uterus.

Mr. TAIT: Certainly.

Dr. BANTOCK exhibited a number of specimens illustrating many forms of disease to which the uterine appendages are liable.

1. A form of disease, which involves no risk to life but entails the most distressing symptoms, rendering the patient incapable of following her usual avocation, was shown in the ovaries of a married woman, aged 29, and the mother of two children. This patient was the subject of severe dysmenorrhœa. The cervix had been dilated with temporary relief, but the dysmenorrhœa returned in a few months with increased severity and with the addition of more or less constant pain. At the urgent entreaty of the patient and on the ground of negative evidence from the absence of any enlargement and inability to feel the ovaries in a favourable subject, which induced him to conclude that the ovaries were cirrhotic, he removed the appendages. Examination of the specimens confirmed his diagnosis and the result has been a complete cure, both in the arrest of menstruation and the relief of pain.

2. An example of one of the results of salpingitis in enlargement of the tube in association with an ovarian tumour on the opposite side with a twisted pedicle. In this case both tubes were as large as the index finger, that on the side opposite to the tumour being closely adherent to the posterior aspect of the broad ligament. The patient was a married woman aged 25, without family.

3. An example of abscess of the right ovary with salpingitis and adhesions and chronic salpingo-ovaritis in the left side. This patient was a single woman, æt. 36, who had had one child some years ago. There had also been some hæmorrhage from an unascertained source involving the serum, which had to be very carefully separated. The operation was a very formidable one, but the success was complete.

4. An example of blood cyst of the left ovary with salpingo-ovaritis on the opposite side, very extensive. The patient was a single woman, aged 32, and had been an invalid

for several years, with difficulty following her occupation, serving in a boot shop. Hæmorrhage was very serious after the operation from the torn adhesions, and the drainage tube was not got rid of within a fortnight. The result, however, was a complete success.

5. A beautiful example of the parovarian cyst, of the size of a large orange, removed from a married lady, æt. 24, with one child. This specimen illustrated the facility with which the cyst could be shelled out of its peritoneal envelope formed by the two layers of the broad ligament, between which the organ of Rosenmüller is situated.

6. A small sarcoma, weighing about half a pound, of the left ovary which had undergone cystic degeneration. For convenience' sake he had not brought the larger one weighing six pounds, formed by the right ovary. In this case the patient was a single woman aged 36, and this disease was associated with ascites to the amount of twenty-six pints. Although the patient had recovered from the operation, *making his eighty-first consecutive successful ovariectomy* in the Samaritan Free Hospital, yet he feared the ultimate result would not be satisfactory, for there was evidence within the pelvis that infection of glands had already taken place.

7. A recent specimen removed the previous morning from a single woman, aged 24, illustrating the conditions of hæmatosalpinx in the uterine end of the left tube, and pyo-salpinx in the outer portion, in which the contents had undergone caseous degeneration, and in the right tube pyo-salpinx in the same stage, together with almost complete severance of the tube by a constricting band of adhesion, a condition which he could scarcely have thought possible without actual observation. Although it was not possible to say what the result of this operation would be, yet he had the satisfaction of saying that she promised exceedingly well, as so far there was no unfavourable symptom.

Dr. FANCOURT BARNES showed an ovary with the left Fallopian tube which he had removed six weeks previously, from a patient who had been incapacitated from work in consequence

of suffering, and was a chronic invalid on account of pyo-salpinx. She left the hospital quite well about a fortnight ago. The tube was full of thick yellow pus, and the walls were very much thickened. In reply to Dr. Heywood Smith, he said that he did not make a differential diagnosis between pyo and hydro-salpinx, all he had done was to diagnose one OR the other.

Dr. EDIS observed that the case threw a great deal of light upon the importance of diagnosis and the utility of electrolysis in such cases, but as the latter had so recently been considered by the Society he did not think it was desirable to re-open it then. He remarked that the glut of material was to be regretted, to some extent, since it prevented them dwelling on particular cases of interest. There could be no doubt that thousands of women, in the length and breadth of the land, were suffering, as only women could suffer, whose condition was totally ignored or disregarded, and who were treated by purgatives, hot water douches, caustics, pessaries, and what not, without deriving any but trifling benefit. He agreed with Mr. Lawson Tait that when the symptoms justified their opening the abdomen their duty was to do so. Formerly they merely tinkered about with pessaries and the patient went unrelieved. He thought it ought to go forth that men in general practice ought not to allow their patients to continue for years to suffer without having recourse to an operation, which, on the whole, involved very little risk in competent hands. He thought they were very much indebted to Mr. Lawson Tait, Dr. Bantock, Dr. Barnes, and others, for insisting on the only proper treatment for such cases. He said that if men could only be brought to appreciate the importance of having these cases attended to, they would be much more ready to have recourse to operation.

Dr. ROUTH observed that Dr. Bantock did not say whether he had recognised the condition of things before operation. With reference to the remarks of Dr. Edis, he suggested that it was impossible to accept the idea that a woman's abdomen ought to be opened simply because they were unable to make



out what was the matter with her. What they were looking for at the present time, was for some means of ascertaining exactly what the condition really was beforehand. This having been done, if there was a *prima facie* reason for suspecting the existence of pyo-salpinx, well and good. He thought that the mere fact of a case not having been cured by other means was hardly sufficient.

Mr. LAWSON TAIT replied that the President had said nothing about the abdomen being opened merely because there were symptoms they did not understand, nor would anybody short of an idiot suggest anything of the kind. What they did maintain was that if women were unrelieved by every other method of treatment, and were in a condition which rendered life a burden, then it was justifiable to open the abdomen, to see what was the matter. It had been shewn that the mortality of pyo-salpinx, when left alone, was not short of fifty per cent., a figure vastly in excess of the operation for its relief. He asked whether a surgeon would allow an abscess of the knee-joint or eye to go on unrelieved. He supposed not, and all they asked was that the same rule of surgery should apply here as elsewhere. Dr. Routh had said that he (Mr. Tait) admitted opening the abdomen and finding nothing; that statement he denied. They did not pretend to make an absolute differential diagnosis of tubular disease, say between hydro-salpinx, hæmato-salpinx and pyo-salpinx; but they found physical evidence in support of the patient's statements, irrespective of the malady being purulent or merely serous. The distinction could not generally be made beforehand; a surgeon may make a lucky shot now and again, but he was just as likely to make a mistake. He knows that there is something wrong there which justifies him, in the first place, in believing his patient and, other things having failed, in doing the only thing that could be done to relieve her.

Dr. BANTOCK stated, in reply to Dr. Routh, that in all the cases of disease of the appendages brought forward, he had been able to ascertain by the physical signs that the cases

were suitable for operation. Even in the case of cirrhosis he had diagnosed this condition. Although the subjective symptoms were very well marked, yet the physical signs were entirely negative, and it was from the fact that no swelling could be found, nor even the ovaries made out, in a case favourable for bi-manual examination, that he had arrived at his diagnosis. In the last case quoted it was quite easy to make out that there was disease of the appendages on both sides; but especially on the left, where a small globular body could be felt, together with a small mass of an undefined shape. In this case, however, the attempt to make an accurate diagnosis would certainly have failed, for while the globular body would have been taken for the ovary, the other mass would have been taken for the enlarged tube. But the specimen showed that the globular body was a hæmato-salpinx, and the other was formed by the fusion of the ovary and outer part of the tube, and their adhesion to the broad ligament. It was not necessary to make an accurate diagnosis in these cases. It was sufficient to be able to say that there was disease, which nothing but abdominal section could clear up.

And so it was with the other cases. It was impossible to diagnose a blood cyst in the one case, or abscesses of the ovary in the other, associated as they were with extensive adhesions and enlargement of the tubes.

Dr. FANCOURT BARNES, in reply, spoke in support of what Mr. Lawson Tait had said as to the mortality among women suffering from pyo-salpinx, for whom nothing was done. They all knew that they were in danger of their lives. In the case he had just shewn them, as he drew the tube up from the pelvis, the sac burst, and the pus escaped before he could apply a ligature. This occurred even with the slight pressure applied, and shewed she was running a great risk of rupture every day.

Dr. EDIS said that he did not assert that any surgeon would be justified in opening the abdomen because there were symptoms which he could not understand. What he

did say was that if, from the difficulties of the case, they could not distinguish between a hydro- or a pyo-salpinx, or an enlarged ovary, if the symptoms were such as to justify interference, they ought not to wait to make a differential diagnosis.

*Intra-uterine Medication.* By ROBERT BELL, M.D., F.F.P.S.,  
Glas. Physician to the Glasgow Institute for Diseases  
of Women and Children.

MY object in bringing the subject of intra-uterine medication before the Society is simply and solely to detail my experience of its utility in the treatment of uterine disorders, and to demonstrate the various advantages I have observed to follow its judicious, careful and regular employment. The physiology, not to speak of the pathology of the uterus and its appendages, to my mind are far from being in a satisfactory condition, and my theories and conclusions, I am quite prepared to find, may be considered crude and difficult of acceptance, yet such as they are, I have no hesitation in submitting them to the kindly consideration and judgment of the members who have done me the honour of being present to-night.

My feeling is that the uterus in a very large majority of cases is the *fons et origo mali* in a great many of the various affections, to which the tubes and ovaries are liable, and therefore through its medium we have it in our power not only to avert such diseases, but to arrest them when they are making progress, and even cure them when they have become established. In flexions, also, I hold we are too liable to attach undue importance to the so-called supports of the organ. It must not be inferred, however, that I do not recognise the great utility of some of these, amongst which I would enumerate the sacro-uterine ligaments, the vagina and in relation to it, the perineum; but when we come to speak of the broad and round ligaments I must express my doubts. My convic-

tion is, we do not sufficiently recognise the importance of an intact vagina and the normally rigid condition of the uterus itself, its comparatively light weight and its tubular formation. It is held by some eminent authorities that uterine engorgement is not a necessary result of displacements, especially flexions. Dr. Mann, of the University of Buffalo says, "The uterine artery gives off a large number of parallel branches, which run at right angles to the main trunk, and anastomose freely with the corresponding branches on the opposite side, so the uterus may be regarded as composed of numerous segments, each of which has its independent vascular supply. It is obvious, without argument, that no flexion, however sharp, can cause any considerable interruption of the circulation either above or below the point of flexion." Now this is very true with regard to the arterial supply, and this is the more emphasized when we take into consideration the elasticity of the walls of the arteries, but what about the veins and venous sinuses which exist, with their membranous coats which are so easily compressed at the line of flexure. What Professor Mann holds up as an argument against the possibility of engorgement strengthens my view, and if it does so it certainly makes his theory. It is because the afferent vessels are so little interfered with and the efferent vessels are so much, that in flexions engorgement with its evil consequences do supervene.

If we view a healthy uterus we cannot but be struck with its comparatively pallid appearance, and yet we know from a study of its minute anatomy, how vast is the network of bloodvessels and lymphatics it contains. Whence then this pallor? Doubtless it is due to the tonus of its muscular walls, and this is the point to which I desire to direct special attention. Indeed, so long as this tonic condition of the uterine walls exists, flexion is impossible, and this must be departed from either physiologically (which occurs just prior to and during menstruation), or pathologically, before a flexion can possibly result. Remove the tonicity of the muscular fibres which regulate the arterial and venous circulation, then en-



gorgement results and a flaccid condition of the walls ensues. Thus we have sudden and violent concussions on the sacrum producing retroflexions when the accident occurs near the menstrual epoch. I may here state that in my experience every traumatic case of retroflexion in multiparous women has occurred just about the menstrual period, and what aggravates the tendency is, that in consequence of the pain and discomfort which results, the patient is put to bed, where she lies on her back, and in all probability permits the rectum to become overloaded, by which the uterus is firmly held down in its flexed position. These remarks are, perhaps, slightly out of the way, and yet they are necessary to illustrate what I am about to say.

My first question then is, what is the best application, as a rule, to employ in intra-uterine medication? Apostoli uses electricity, but that I merely refer to as I can see no advantage it possesses. Moreover, none of his apostles seem to have any idea how it acts, or which pole should be inserted in different circumstances. My impression is, that the effect is very similar to that produced by other applications, viz., a stimulus to the muscular fibres of the uterine walls, causing them to spasmodically contract and thus expel the contents of the surcharged veins and sinuses. I have treated over 2,000 cases of endometritis, and I flatter myself the results will compare favourably with those of Apostoli.

It will be quite unnecessary for me to refer to the various medicaments which have been and are in vogue, for the purpose of treating the endometrium. So far as I am able to judge that which yields the best results is the iodised phenol, the proportions being 320 grains of iodine dissolved in 8 ounces of liquefied carbolic acid. This preparation possesses many advantages. It is aseptic and antiseptic in the highest degree, thus its employment is not attended with any of the dangers of Apostoli's appliances, and it yields equally good results. Secondly, the carbolic acid exercises a powerful anodyne effect on the endometrium, thus the pain produced by the application soon subsides, and thirdly it possesses powerful alterative properties.

The first class of cases that I will take up is that of endometritis, which, as we know is the source of so much misery, and I am convinced is also the factor of those inflammatory diseases which affect the Fallopian tubes, and not only these, but through the lymphatic connection with the ovaries it may in all probability set up disease in these also. It goes without saying that the ovaries in a very large majority of cases of endometritis do suffer from inflammation in consequence of the serious congestion which follows in the wake of the primary affection of the uterus. In proof of this, I may state that I have frequently observed cases of salpingitis get completely well under the treatment of endometritis, and also it has been my good fortune to note the steady decrease and complete disappearance of oöphoritis under the same circumstances. The frequent, nay, almost constant presence of ovarian hyperæsthesia in endometritis points conclusively to the fact that a morbid condition of the ovaries very frequently depends solely upon a diseased condition of the uterus, and the disappearance of the oöphoritis simultaneously with the endometritis puts this beyond all doubt. While on this subject it is worthy of note that the pain produced by an application to the endometrium in these circumstances is referred by the patient more to the site of the ovaries than to the uterus itself.

Before quoting any cases illustrative of my method of employing medicaments to the endometrium, I would draw attention to the possibility in every long standing case of their being present a granular, if not actually a fungoid, condition, to boot. It is therefore of great consequence to remove such growths as a preliminary to the strictly medical part of the treatment, whereby the proceedings will be very much shortened. For this purpose I have had made a new form of curette which can be employed with much greater ease, and less pain than those I have previously been acquainted with.

Mrs. R., æt. 38, had two children, the younger being ten years of age. Patient had not been well since the birth of this child, and was, when I first saw her, in very feeble health. She had consulted several medical men, and had been more or less

under treatment all these years without deriving benefit. She complained of acute pain over right ovary, which was aggravated on the slightest exertion, of great weakness which was very pronounced after the least fatigue, of lowness of spirits, irritability of temper, and in fact all the train of symptoms which we are all so familiar with in cases of endometritis.

On examining per vaginam I found the perineum was deficient, having been lacerated during her first confinement. The womb was lying low, very flabby, sensitive to touch, and from its orifice a muco-purulent secretion was exuding.

On applying iodised phenol to the endometrium great pain was produced, especially in the region of the right ovary. The applicator was permitted (as is my custom) to remain within the uterine cavity for a minute or so, until in fact it had excited sufficient muscular contraction to render its withdrawal more difficult than its entrance. It was then withdrawn, and a tampon saturated with the glycerine of alum and boracic acid placed in the vagina. This was permitted to remain for three days. At this time I advised the patient to come into town and have the perineum repaired, as I was of opinion that the metritis and prolapsus were due very largely to this defect, and not only would the uterine mischief be more speedily removed were this preliminary step taken, but the cure would have a much greater chance of being permanent. She accordingly had the perineum repaired by the flap method, and afterwards was under treatment for four months, during which period I applied iodised phenol once a week to the whole extent of the lining membrane, after which a tampon was introduced and allowed to remain for three days, when it was removed and a new one put in its place and permitted to remain for a like period. Now this patient had thirty miles to travel each time she came to see me, which with the return journey must necessarily have retarded her recovery. Had she been resident in Glasgow I am convinced her recovery would not have been so long delayed, yet notwithstanding this drawback she was in very good health by the end of four

months, and expressed herself as feeling better than she had done for ten years. Besides the local treatment she took  $2\frac{1}{2}$  grains of valerianate of zinc, and 2 grains of extract of conium in pill forenoon and afternoon, the bowels were cleared by an enema every second day, and other hygienic measures were carefully attended to. Now here was a case which had been under treatment for eight years without deriving the slightest benefit, recovering, when the treatment was directed to the endometrium, in four months. We surely do not wish any better evidence than this of the utility of intra-uterine medication in suitable cases.

I will now proceed to give the history of a distinctly different example, and will do so as briefly as possible, for it would be a waste of time to describe the subjective symptoms with which we are all so familiar.

Mrs. T., æt. 33, married six years, two children, youngest four years of age. Patient has not felt well since last confinement, her health gradually going down since, although she has gained very much in weight. During the past two years she has suffered very much from metrorrhagia, which at all times continued for three out of the four weeks, and when it did cease a purulent discharge took its place. Vaginal examination disclosed an anteverted, enlarged, and flaccid uterus. The uterus was curetted and underwent two months of intra-uterine and tampon treatment, but in this case the application was made bi-weekly. She was also put upon 15-grain doses of the muriate of calcium, three times daily after food because of her strumous appearance. She called upon me three months after the treatment was commenced and one month after it had been discontinued to report herself, when she expressed herself as feeling quite well, and informed me that her menses the last time had continued only five days. I need not tell you, gentlemen, that it would be too much to expect every case of this disease to yield so readily to treatment as those I have detailed, but even if we get equally satisfactory results in six months we have reason to be satisfied, and in the very large majority of cases we shall not need



to persevere for any such lengthened period. For my part I hold there is no class of cases which give so much gratification to a medical man as this class of disease, as the success of treatment is so certain and the relief to the patient so pronounced and visible, not only to herself, but to her friends.

I need not give in detail any more cases of this disease which have come under my notice, though this would be no difficult matter, seeing I have attended over 2,000 cases of endometritis during the past ten years. I would, however, like to speak of its prevalence amongst young ladies, giving rise to most acute dysmennorrhœa as well as undermining the physical and nervous health of the individual. At this moment I have under treatment three cases of hysteropilepsy in young ladies, which, I am convinced, will get well when the uterine mischief is removed, and thus repeat an experience which I have frequently had in the past. We must not overlook the probability that if a girl who is suffering from endometritis gets married, the disease will increase in severity and sterility will certainly result. This is a most delicate but important matter for consideration, but, nevertheless, it should be dealt with whenever it exists, or most assuredly a miserable married life will be the experience of your patient. In almost every such case there will exist vaginismus to a very considerable extent, so that it will be necessary, before any consecutive treatment can be carried out, to overcome this in the first instance. I happened to see one of my unmarried patients to-day who had been under treatment during three months for metritis. She suffered most intensely at each period from dysmenorrhœa and epileptic seizures. The metritis is now well and with it the dysmenorrhœa and epileptic fits have gone also.

I will now proceed to speak of intra-uterine medication in a class of cases where it is not usually employed, but where I have found it very useful, this being due to the fact that displacements are invariably associated with a softened condition of the uterine walls, resulting from a congestive condition of

the parts. And I may here be permitted to remark that though not in every case successful, the removal of the flaccid condition of the uterine walls which so uniformly prevails in flexions, has in a very large majority of instances done more in my hands to remove the displacement and give a permanency of relief than that obtained by the employment of any variety of pessary that I am acquainted with. It will be obvious to any unprejudiced mind that the result will be much more satisfactory if, while we restore the flexed organ to its normal position and at the same time employ means to give tone to the uterine walls, we will obtain better results than if we simply keep the debilitated organ in position by a pessary. In the former case we not only relieve the uterine engorgement, but also the concomitant constitutional symptoms, and thus improve the general health of the patient, whereas in the latter the health of the individual remains very much in *statu quo* from the fact that the atonic and hypertrophied condition of the uterus remains or at all events disappears very slowly. It must not be inferred, however, from what I have said that I discard the employment of pessaries altogether in the treatment of flexions, for in many instances they prove a most useful auxiliary in the early stages of treatment. My plan of treatment is first by means of the sound to ascertain the curve of the flexed organ, and then after bend the applicator (which I have made of soft copper wire) as the sound indicates. Having armed this with cotton wool firmly wrapped round the distal end to the extent of three inches, and saturated it with iodized phenol, it is passed up the uterine canal to the fundus. By means of the applicator the uterus is made to revolve till it occupies its normal position and there it is retained for a few seconds. As a rule the uterine walls will contract firmly on the foreign body and remain rigid and erect. The applicator is then withdrawn, when it will be found that for the time being the uterus does not return to the previous abnormal position, but remains in that to which it has been restored. A tampon soaked with glycerine of alum and boracic acid is then packed in behind

the uterus and allowed to remain for three days, when it is removed and another substituted. As a rule it will be unnecessary to make the application to the endometrium more frequently than once a week.

The object of the tampon is two-fold ; first, to retain the uterus in situation, and, secondly, to act as a depleting agent to the hypertrophied tissues.

By this method it has frequently been my good fortune completely to overcome the tendency of the uterus to fall back into its retroflexed position, in short to restore it to its normal position which it is able to retain without mechanical support. The treatment of such cases will, as a rule, occupy from three to four months, and during this period, it is my custom to introduce Hodge's pessary before the menses are expected, and allow it to remain till the flow has ceased, with the view of retaining any advantage that has previously been gained, and afterwards the treatment is resumed.

Two cases will be sufficient to illustrate the foregoing remarks :

*Case 1.*—Mrs. P., æt. 35, consulted me about two years ago, she had slight retroversion combined with retroflexion and considerable hyperplasia of the uterus. The os and uterine canal were patulous, from which was oozing a muco-purulent discharge. She complained of the usual symptoms in such cases, but her chief complaint consisted in the fact that she had miscarried eight consecutive times about the  $3\frac{1}{2}$  months. The cause of the frequent mishaps was to my mind due not only to the unhealthy condition of the uterus but to its position, as from the relation it bore to the hollow of the sacrum, I could see that if pregnancy existed, the enlarging uterus would become impacted in the sacral cavity, and therefore would be unable to attain any further development, when, as a consequence, abortion would follow. I therefore proceeded with the plan of treatment which has just been described, and with the most satisfactory results as far as the flexion and version were concerned, but I took the precaution of inserting a Hodge pessary within the vagina at her last visit to my

house. Seven months ago she sent for me to ascertain the position of the womb, as she was again pregnant and was naturally very anxious. I, however, found the position of the organ all that could be desired, and she has gone on most satisfactorily since, and expects her confinement in April.

*Case 2.*—Mrs. L., æt. 36, consulted me in September last. She was wearing a Hodge pessary for retroflexion, but complained of it hurting her very much. She dates her first illness from the birth of her last child which took place in China eight years ago, since which time she has been more or less of an invalid. The uterus was exquisitely sensitive, and she always experienced pain both immediately prior to and during the first day of the menstrual flow. There was not only metritis but, as I have said, excessive hyperæsthesia of the organ, so that I was afraid to interfere with the endometrium before I had first reduced the metritis by glycerine and boracic acid tampons which were introduced bi-weekly for a month, after which time I employed intrauterine medication once a week, each time restoring the womb to its normal position, and retaining it there by one or more tampons properly adjusted. During the whole period of treatment which occupied three months, she expressed herself as being highly gratified by the results, being conscious of gradually returning health. At the end of the period named, the uterus was able to retain its normal position, and there was complete freedom from any inflammatory symptoms. I must confess, however, that the results of the treatment are not either so rapidly obtained or so uniform as in this case, but that they can in many instances be produced is sufficient to encourage us in giving this method a further trial, and I would venture to solicit the judgment of this Society upon it.

In conclusion, I come to speak on a subject which to us as gynæcologists is, at the present moment, engrossing our attention very much. I refer to the treatment of fibroids of the uterus. At the onset I must confess I am neither an apostle of Apostoli nor a disciple of Mr. Lawson Tait. If on the one hand these growths can be got rid of by electricity applied to



the endometrium, or by the more dangerous method of applying the current directly to the tumour, or on the other by removal of the uterine appendages, by which the blood supply of the ovarian vessels is removed, I would ask can the end not be accomplished by so restoring the equilibrium of the uterine circulation and tonus of its muscular structure that the blood supply will only be sufficient to nourish the normal tissue to the disadvantage of the adventitious growth, so that the latter will assume the character of a foreign body, which it undoubtedly is, and the former by its contractile power, will either be the means of starving it out of existence, or expelling it from its niches. These may be considered very crude ideas, but facts are stubborn things, and with these remarks I will proceed to defend the position I have taken up. Seven years ago I was called to attend a case of endometritis which had completely undermined the health of the patient. She had copious muco-purulent discharge from the uterine canal and at the catamenia the flow was excessive. On examination I could detect a small myoma in the anterior wall just beyond the cervix, but to this I gave very little attention, and proceeded to treat the endometritis which existed in my usual way. The result was so far satisfactory that the patient improved very much in health, but whenever treatment was discontinued she fell back again to her former condition of ill-health, till on one occasion on applying to the canal the applicator when withdrawn was minus the cotton wool with which it was loaded, and do what I could I failed to extract the cotton, so I was obliged to console myself with the fact that it was charged with an aseptic substance, and would do little or no harm, though it did not come away for a day or two. Within a few hours of the patient's return home, she was seized with violent uterine pains and I was sent for to find her suffering very acutely. In a short time, however, the small fibroid before-mentioned had shot down into the vagina, and with it the cotton I had left in utero, when all pain ceased. I removed the polypus, and from that time the patient has not suffered from any uterine trouble, but on the contrary has borne two children.

During the past three years I have treated many cases of fibroids by acting on the endometrium, and through it upon the uterine walls, and with the most gratifying results, which I must however leave to be the subject of a future communication to the Society.

Dr. BANTOCK said that the subject was one in which they were much interested, and they had all met with a number of similar cases. He asked Dr. Bell whether he distinguished between flexion and version, for he (Dr. Bell) had seemed to speak of them indifferently. He said that for flexion, a vaginal pessary was altogether useless, nothing short of a stem pessary doing any good, whereas for version, the vaginal pessary was a very admirable instrument. He did not know that there was any difference in principle between the treatment which Dr. Bell adopted and that employed by himself. Dr. Bell treated cases of chronic endometritis by tampons of glycerine and the application of iodised phenol, but he, himself began by depleting the uterus, and he thought that one obtained much more rapid results by so doing. Dr. Bell had shewn them what he called a curette, but if he had to deal with fungoid granulations of the uterus he would not use such an instrument. It was quite possible to get an instrument by which you could do no harm to the uterine mucous membrane, and which would be much more effectual in removing the granulations. His own instrument was much more satisfactory. He was agreed as to the pathology of antiflexion. Passing on to the treatment of fibroids by intra-uterine medication he said that there could be no doubt that in a certain number of cases in which hæmorrhage was a prominent symptom, a fungoid or granular condition of the endometrium existed in association with a small fibroid. It was easy to dilate the cervix and remove the granulations and do the patient a great deal of good. That was when the tumour was small and showed no sign of growing; where they had several tumours in the uterine walls to deal with, it was often difficult to get a sound inside, and he considered that any attempt to dilate the uterus under these circumstances would probably end in disaster. Such cases therefore ought to be excluded.

Dr. AVELING said he did not gather whether Dr. Bell was in the habit of dilating the uterus before using his curette. He thought the latter was a very bulky instrument, without any advantage over the blunt curette which could be used with perfect safety.

Dr. HEYWOOD SMITH said he considered the paper a very suggestive one. He agreed with Dr. Bell in the main lines of treatment which he had laid down, and he agreed with what Dr. Bantock had said as to the preliminary depletion of the uterus. There was no doubt that by beginning with puncturing or leeching followed by tampons, they got better results. Moreover, one could then dilate with safety. Dr. Bell did not tell them anything about the preliminary dilatations, and he asked him whether he dilated before introducing the probe with the iodised cotton wool. Under ordinary circumstances a great deal of the solution would be squeezed out in endeavouring to do so without previous dilatation. His own practice was to dilate rapidly with graduated sounds up to about number 11 or 13, and keep the sound in the uterus for a few seconds, then quickly removing the sound he passed the probe with the cotton wool. It could then be passed in without losing a drop. Incidentally referring to what Dr. Bantock had said with regard to flexions and versions, he thought he had generalised too much in saying that all flexions, in contradistinction to versions, required intra-uterine stems. He agreed that such was the case with respect to ante-flexions, but retroflexions were not so stiff as ante-flexions, and he was convinced that there were many cases of retroflexion which could be cured without intra-uterine stems. He asked Dr. Bell what he would do in cases of endometritis limited to the fundus. In these cases the characteristic pain was only evident when the sound reached the fundus, and was generally referred by the patient, not to the region of the ovaries, but to the neighbourhood of the umbilicus. Then with regard to the curettes, he thought those shown by Dr. Bell were extremely valuable instruments. He thought that the ordinary sharp-edged curettes might be attended with risk, unless there was a

distinct hard induration to be cut through. In these new curettes, however, the wire loop seemed thin enough to form a sort of cutting edge, and the curette itself would act as a sort of cage or dredge, and bring away with it all the *débris* which it removed from the uterine cavity.

Dr. MANSELL MOULLIN said that Dr. Bell claimed to have treated over 2,000 cases of endometritis. It was quite evident that he was using that term in a comprehensive and inexact manner which was calculated much to depreciate the value of his remarks. That such was the fact was, he thought, self-evident from the cases related.

The sudden production of retroflexion by severe blows on the sacrum was a much debated point. He did not believe in it, although many leading gynæcologists professed a wide experience in such cases. Dr. Bell did not believe in it either, and very correctly said that it was impossible to occur as long as the uterine walls preserved their proper tone, but at the same time he advanced a theory that the walls did lose their tone during and about the time of menstruation. Dr. Moullin maintained that a suddenly produced retroflexion was as impossible at this time as at any other. Retroflexion was essentially the result of a long continued cause. It was due to the want of tone and inability of the middle segment of the uterus to sustain the upper, either on account of its weight or the pressure placed upon it, and involved atrophy of the wall at the seat of flexion. Typical cases might be seen in debilitated and anæmic girls, in whom, moreover, displacement and prolapse of the whole of the pelvic organs might occur. The worst case of prolapse of the vagina, uterus, rectum and bladder he had ever seen was in an unmarried girl of this description. The treatment and necessity to maintain the prolapsed organs in their proper place by means of a suitable support was obvious. It was hopeless, however, to expect that they would recover their normal tone and condition to such an extent as to be able to maintain themselves in position without extraneous assistance. Similarly a retroflexed uterus was supported by a pessary, but if that pessary were removed,



months or years subsequently, the uterus would almost certainly return to its abnormal position. Even when gestation took place in almost every case the retroflexion reappeared as soon as the process of involution was completed. It was too much to expect that a little temporary spasm excited by the application of a caustic to the lining membrane could, under such circumstances, restore the normal condition and tone of the uterus as claimed by Dr. Bell.

He thought electricity might be tried with advantage in cases which depended solely on want of tone. Not such currents as had been used to bring about a so-called electrolytic action, but a mild faradic current, such as was employed to restore the tone of debilitated muscles elsewhere.

He was strongly opposed to the indiscriminate application of caustic substances to the interior of the uterus.

Dr. PRIDHAM expressed the pleasure he had felt at listening to Dr. Bell's paper. There were many cases in private practice which yielded to Dr. Bell's, combined with constitutional treatment. With regard to electrolysis he quoted a case which had come under his notice twenty years ago, in which the patient had the largest abdominal tumour he had ever seen, it actually reached so high as to interfere with the action of the heart. The patient was brought to London and examined by Sir Spencer Wells, who made an exploratory incision and found that the tumour consisted of the uterus itself. As no authority could be given to remove the uterus the wound was closed and the patient was taken back to Devonshire. From that day the tumour began to subside and was now no bigger than his fist. He suggested that had the tumour been electrolysed they would have been told that it was cured by electricity.

Dr. BELL, expressed his regret that the lateness of the hour would prevent his replying in detail to the strictures on his views. In answer to Dr. Bantock, he held that it was possible to restore the tone of the uterus by removing the condition which gave rise to the morbid condition. He

held that if one could possibly re-establish the condition of the uterus the displacement would disappear, not because it was supported, but simply by its inherent power of resuming its erect posture in consequence of the erectile tissue which it contained. With reference to the livid appearance of the uterus in certain cases, he pointed out that the introduction of a stimulating application, caused this to give place to pallor. He never used caustics himself to the interior of the uterus. He had treated a great number of cases of metrorrhagia by means of the ordinary curette over and over again, but in one very bad case at the Bridge of Allan he had employed the simple loop of wire. The curette he was speaking of had cleared the whole uterine walls in one sweep and the metrorrhagia ceased entirely. He maintained that, if one strengthened the uterus, there was no difficulty in introducing the sound. It was seldom necessary to dilate because in endometritis there was generally a patulous os. In any case the constriction would only be at the external os.

The Society then adjourned.

*THE BRITISH GYNÆCOLOGICAL SOCIETY.*

WEDNESDAY, APRIL 25, 1888.

ARTHUR W. EDIS, M.D., F.R.C.P., PRESIDENT, IN THE CHAIR.

PRESENT: 28 Fellows, 6 Visitors.

The following were elected Fellows of the Society:—Dr. J. J. Pitcairn, Dr. J. Moir.

The following was proposed for election:—Dr. F. Wilson, Cape Colony.

Books and instruments were presented to the Society by Dr. Mundé, of New York; Dr. James Smith, Belfast; and Dr. Borlase Hicks, London.

Dr. FANCOURT BARNES said, Sir, I have in the next room a living specimen of a hermaphrodite. I use this term on general principles, because it is the case of an individual who has been brought up to the age of nineteen as belonging to the female sex, when it is perfectly clear that he was a male. The mother had a fright when about two months pregnant. At the time of birth the doctor said it was a girl, but a fortnight later the mother noticed something wrong with the genitals. The hair began to grow on the pubes at the age of nine, and now extended nearly up to the umbilicus. Hair had also grown on the arms, and especially the fore-arms. The mother said her child's tastes were decidedly feminine, but she had never shewn any partiality towards the male sex. She was affectionate and gentle towards her brothers and sisters. She wore a plait extending down to the middle of the back. Two or three years ago her hair began to fall off, and moustache and beard appeared. She was evidently shaven. The point of interest in her case was that she had been brought up to live the life of a woman

though undoubtedly a man. As an example of the difficulty of deciding these cases without a post-mortem examination, I would draw the attention of the Society to a child which was born in my wards in the British Lying-in Hospital, and which I had figured in the third edition of my "Manual of Midwifery for Midwives." The child in question looked like a male—had something resembling a penis. It was shewn during life at the Obstetrical Society, and several Fellows examined it in every way most carefully, yet opinions were quite divergent, and it was impossible to decide the sex authoritatively. When the child died three weeks later, an occluded vagina with uterus and ovaries were found. I pass round some photographs of the patient, taken by Mr. Muirhead Little.

The accompanying photographs shew the appearances of the genital organs. In Figure 1 it is seen that the external genitals consist of a penis with no scrotum, no testicles, and no vulvar opening into a vagina.

In Figure 2 the penis, which is sessile like the clitoris, is raised in order to display the opening of the urethra running along the under surface. In passing the catheter into the bladder along this furrow, I had to make the usual *tour de maitre* to enter the male bladder. On examination by the rectum I could detect no uterus, ovaries, or testicles.\* The patient has never menstruated, nor has she shown any symptoms of menstruation. The breasts were absolutely of the masculine type.

The President and Fellows of the Society then proceeded to examine the case.

Dr. EDIS observed that it was a very interesting case because it might come before any practitioner at any time, to have to adjudicate as to the sex.

Mr. LAWSON TAIT said there could be no doubt as to the sex, and it would easily have been decided at any time after

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\* Since this a further examination per rectum has been made under chloroform with a similar result by Drs. Aveling, Edis and myself.





FIG. 1.

the first five years of life. He insisted on the desirability of always classing doubtful cases as males, for an imperfect girl brought up amongst boys could do little harm; but an ill-developed male brought up amongst girls would be sure to be mischievous.

Dr. ROUTII said he was by no means clear that it was a man. Such a conclusion was mere guess work. Even supposing there were no uterus, the mere fact was no argument against its being a woman. He had published a case years ago of a patient who had all the form of a woman, and was married, but who had only a small vagina, not more than three inches long. Her object in consulting him was to complain that her husband was unable to penetrate to the extent he desired. He then made a very close examination. Dr. Rogers,<sup>e</sup> his colleague, managed however, to pass his entire hand into her rectum, and found there was no uterus. Whether there were any ovaries could not be made out. He asked whether this method of examination had been adopted in Dr. Fancourt Barnes' case. With reference to the patient having a beard, he said this had absolutely no weight. Many Jewesses had quite a large quantity of both beard and moustache. In any case, unless there was something detected in that direction which did not appear, he did not think they could come to any conclusion as to the sex in this particular instance.

Dr. AVELING observed that Mr. Lawson Tait, in expressing an opinion that the person was a male, did not give his reasons for so doing. He maintained that appearances did not prove the sex to be male. The presence of beard and moustache proved nothing. He had often seen it in women just as well marked. The face was feminine, the throat was decidedly that of a woman, the *pomum Adami* not being at all prominent. The voice was alto. He alluded to a case at St. George's Hospital where all these characteristics were present, plus a male voice and figure. Yet the patient was a woman, with an enormous clitoris which he had removed on account of the discomfort caused to the patient by its rubbing against the dress. Unfortunately that patient could not be



FIG. 2.

traced subsequently, so that no post-mortem evidence could be adduced. In this case there was hair on the pubes, and he maintained that hair did not grow there in the congenital absence of either testicles or ovaries. If the patient were put under an anæsthetic and the bimanual examination made, per rectum and through the abdomen, they might succeed in finding ovaries or testes. He asked whether this had been done. He suggested that the prostate gland which it was thought could be felt might be a rudimentary uterus.

Mr. LAWSON TAIT said that the lacuna major of the male urethra stared him in the face, and he asked whether this had ever been observed in the female urethra. Dr. Aveling asserted that hair did not grow on the pubes except either ovaries or testes were present, but he remembered a case in which he not only made an examination per rectum and vaginam, but had his hand inside the abdomen in the course of an operation. Yet there was no uterus and no ovaries, and the pelvis was like a tea cup, perfectly smooth and empty. This was a congenital condition, yet the patient had hairs in abundance on the pubes.

Dr. BANTOCK said he could have no doubt as to the sex of the individual. First of all the configuration was undoubtedly that of a male. They all knew how unsafe facial characteristics were as a guide, the dress making such a very great difference. When, however, they examined the genitals then the case was as clear as daylight. The appearance of the sexual organ was that of a penis, and the remainder of the urethra was to his mind, incontrovertible evidence in favour of its being a male. He said that Dr. Aveling's case was not as clear as it ought to be. Although he (Dr. Aveling) had classed the patient as a female, he gave no proof based on post-mortem appearances (Dr. Aveling observed that the patient had menstruated). Menstruation again was hardly reliable. He said it was not safe to make an assertion of that kind without an exhaustive examination during life or post-mortem. They might have a strong opinion but nothing more. He did not think the presence or otherwise of hair



upon the genitals need be taken into consideration, for if the presence of hair indicated the possession of ovaries, what must be thought of the absence of hair, yet he could remember a patient between 20 and 30 years of age, whose external genitals were absolutely devoid of hair, though her reproductive apparatus was perfect.

Dr. HEYWOOD SMITH observed that one would expect, in a hermaphrodite, to find some characteristics of both sexes. In this case the vault of the skull was eminently male, but the face had assumed a feminine cast. One point had not been brought out, and that was in reference to the structure of the so-called labia, the inner surfaces of which were covered with hair, making them appear much more like an infolded scrotum than labia proper. He said with reference to the alleged maternal impression, that the best authenticated cases took place at about the time mentioned, between the second and third month.

Dr. BARNES said it was abundantly clear that the sex was doubtful, and so far the individual was a hermaphrodite; he thought the sexual peculiarities might at some future time be further developed. Although, when he saw the patient at the hospital he believed the sex to be male; he still reserved his opinion. He doubted whether they could distinguish between ovaries and testicles by rectal examination, and he had met with women in whom no uterus could be felt.

Dr. ROUTH asked what would be the sex of a woman without uterus or ovaries. In what sense would it be a woman?

Mr. LAWSON TAIT said that in the case he alluded to, there was a completely developed vagina. As to the vault of the skull, he remarked that the patient was getting bald in a very peculiarly male-way. He never saw a woman get bald in that way.

Dr. EDIS said he had seen the patient with Dr. Fancourt Barnes. He had examined the individual *per rectum*, and discovered what he thought was a prostate. The urethra led right up to it and was surrounded by it. The only way to

arrive at an opinion was to sum up the whole of the evidence. The voice was male, the pelvis was male; there was no mammary development, and a very noteworthy feature as to the hair on the inner aspect of the pseudo labia, was remarked by Dr. Heywood Smith. It was impossible to say definitely until they had found ovaries or testes, but the preponderance of evidence was in favour of its being a male. The patient never had any discharge akin to menstruation.

Dr. FANCOURT BARNES said that when he used the term hermaphrodite he meant that he felt certain some Fellows would say it was a male, and others a female, and that being so the sex remained doubtful. His own reasons for believing the person to be a male were, (1) the appearance of the head, (2) the *timbre* of the voice, (3) the non-development of the breasts, (4) the undoubted existence of a well-formed prepuce and glans penis, (5) the imperfectly formed urethra running down from the tip of the glands and passing into the bladder, (6) the utter absence of anything like a uterus or ovaries, and (7) the appearance of the perineum. The thighs were covered with masculine hairs. There was one other point, that this hermaphrodite was one of eleven children, but the sex of the last born since appeared to be doubtful. He had since seen this child. It exactly resembled the elder one and had been treated as a boy by the parents, on their own judgment. Lastly, the patient never had the menstrual molimina.

Dr. HEYWOOD SMITH suggested that the Society should divide on the question of the sex.

Dr. FANCOURT BARNES added that the rectal examination was only digital, as he did not consider that it was justifiable to expose a patient to the risks and inconveniences inseparable from the introduction of the whole hand into the rectum.

*The sixth case of Kolpo-Hysterectomy.*

By Dr. F. A. PURCELL.

THE specimen exhibited is the entire uterus and its appendages and the growth. The body of the organ is larger than normal, and shows the stump after removal of the growth, which is close up to the internal os. Sections taken from above under the microscope showed epithelial cells, evidence of disease progressing upwards.

The growth which occupied the vagina was, when removed, about the size of a tangerine orange, now much shrivelled from the action of the spirit, is of an epitheliomatous character; the entire os and neck is lost in the new formation, the posterior lip being less so than the anterior, as denoted by where the glass rod is passed through the mass from above, the site of the os showing the disease more to the front.

The right ovary, when removed, showed two small cysts; the left is collapsed, which burst at time of removal. The fallopian tubes seem to be healthy. The following is the case, and the sixth performed by me:

Mrs. Annie H—, age 25, of Bristol; admitted to the Cancer Hospital on 26th March ultimo, was recommended by her medical attendant, Dr. Alfred N. Godby Gibbs, of the same town. She is the mother of two children, the last was born in September, 1886; her confinements were good, with good gettings up.

Dr. Gibbs wrote recently to say that her mother has now a scirrhus of the breast; the mother's uncle is believed to have died of cancer.

About six months ago patient suffered from a bloody discharge from the womb; has been regular in her periods. A growth was soon found occupying the vagina and attached to the os. On examination in hospital, the growth was found about the size of a tangerine orange, os and neck could not be made out; the walls of the vagina felt smooth and free of disease; the body felt larger than normal, all freely movable.

On explaining the condition of affairs, my patient expressed her wish for "the major operation to take the whole away," as recommended to her by Dr. Gibbs, and for which she had come up to London; however, I advised her to be satisfied with the minor operation, unless after removal of the growth I thought it justifiable to proceed to total extirpation; I intended to amputate on a line with the internal os after Schroeder's method.

On April 3rd she was anæsthetised, and having incised the mucous membrane above the disease, the growth was removed by means of the galvanic *écraseur*; after which the stump was examined as well as the growth, and it appeared as if disease was left behind, on this, I then decided to proceed to total removal of the uterus; this was accomplished with no loss of blood, both ovaries and the fallopian tubes were also removed; a clamp-forceps guarded each round ligament pedicle and allowed to remain on for the night. During that night two (quarter-grain) morphia suppositories were passed into the rectum to ease pain. The urine was drawn off regularly, and she was allowed Brand's essence of beef—a teaspoonful at the time. The next morning the pad was found very slightly soiled, the forceps were then removed, and a Tait's glass drain was inserted. At midnight of the second day after operation, a dark coloured discharge, almost having a fœcal smell, came away per drain; the vagina was now douched out with iodined water, and this was repeated every four hours.

Third day.—The discharge was less and not so offensive, the left labium now showed a slough; the discharge from this corresponded to that per drain, parts having been burnt by the galvanic wire.

Fifth day.—The bowels were moved; the discharge showed more purulent and found to travel down outside the tube; complained of abdominal pain, none on pressure, evidently from flatulency, and which was relieved by turpentine flannels; diet increased.

Seventh day.—Bowels moved; at noon she partook of some jelly brought to her by her husband, soon after taking it



her temperature jumped up to 102.6 F. which, however, gradually came down to 99° by midnight ; this was attributed to the jelly.

Eighth and ninth days the vaginal discharge became less ; now allowed boiled fish, tea besides her beef-tea, and bread and butter. Temperature normal to subnormal, is convalescing and cheerful. The vaginal douches having been persistently carried out ; and the urine drawn off by catheter.

Twenty-second day (25th April).—She is up and walking about the ward for the last three days ; little or no discharge ; appetite more than good, is in every way happy and contented, and intends to return to Bristol this week.

Dr. EDIS pointed out that the patient was only 25 years of age, and was suffering from an otherwise incurable disease. The specimen showed clearly enough what was the nature of the growth. Under such circumstances total extirpation seemed justifiable in order to relieve it. It was an axiom of conduct in these cases either to remove everything, or else to do nothing, and he thought it was a motto to be closely followed.

*A Method of Treating Incontinence of Urine in the Female, in Cases hitherto considered to be beyond the Resources of Surgery.* By WILLIAM ALEXANDER, M.D., F.R.C.S., Visiting Surgeon, Liverpool Workhouse Hospital, Honorary Surgeon Royal Southern Hospital, Liverpool.

INCONTINENCE of urine from paralysis or destruction of the urethra has, up to the present time, proved itself one of the most disagreeable and incurable affections to which women are liable. Thanks to the labours of Marion Sims and others, urinary fistulæ are no longer incurable. Where, however, the urethra is absent, or its sphincter action is lost, the ordinary operations for the cure of fistula fail, and nothing remains but the contrivances alluded to by Harrison in Ashurst's "Surgery," in the following words :—

"It will be necessary for the patient to wear some contrivance by means of which the urine can be collected as it escapes from the urethra. Bags made of india-rubber, which may be concealed under the clothes, will be found best adapted for the purpose. Unless great care be taken in keeping these bags clean, they are apt to become very offensive."

These statements apply most favourably to the male. In the female it is well nigh impossible to keep the patient dry by means of bags. Some urine always escapes past the side of the apparatus, and creates the stench, the moisture and the scalding, that seems inseparable from the disease.

I read somewhere a few months ago a series of cases where incontinence of urine was the prominent symptom. Various operations succeeded in curing them all save one. This patient was discharged as beyond the resources of surgery.

Although fortunately such cases are comparatively few in number, they would, I think, prove to be more numerous than we could anticipate if all our workhouses were ransacked, and all the shy and retiring sufferers discovered.

Concealment of their infirmity and seclusion from society are the accompaniments of the disease, and for these two things the poor sufferers live.

The writers upon the cure of urinary fistula have referred in appropriate terms to the misery associated with urinary incontinence, and we need not here say anything more about that, but proceed to describe its cure, and the kind of cases referred to.

Such a case came under my care in the person of Mrs. D., æt. thirty-five years, who was admitted to the Liverpool Workhouse Hospital, on June 6th, 1885, suffering from incontinence of urine.

She says that she was an actress, who had two miscarriages—no full grown children. She ascribes her illness to retention necessitated by her life on the stage, having to retain her urine for a whole evening without possibility of relief. When an opportunity of ameliorating presented itself, she often found herself unable to pass any water for a long

time. Gradually the bladder became irritable, so that she would have to run to pass urine. Sometimes she would be surprised and wet her clothes. Ten or twelve months before admission the incontinence was complete and permanent, and she was wet by day as well as by night. On examination the urethra was found quite patulous and capable of admitting with ease the index finger, being thus in excess of the amount of dilatation regarded as safe by the experiments of Simon of Heidelberg. The outer extremity of the urethra was very wide indeed, and all evidence of sphincter action was absent; otherwise a strong, vigorous, healthy woman. This dreadful infirmity was much felt by the patient, and she said she was prepared to undergo any amount of "punishment," if by any means she might be cured.

Strychnine, belladonna, cold baths and tonics were tried in vain; escharotics, cauteries and galvanism absolutely failed; the urethra was closed by operation, so that its diameter did not exceed a No. 3 English catheter; but the dribbling still continued though in a smaller stream, and her bed was still wet by night as well as her clothes by day. A special urinal failed to afford her any real mental or physical comfort.

Had the hospital been a general one, I would not have discharged her as incurable; but as she was in the Workhouse Hospital there existed no lower depth to which to consign her, and hence I was forced to keep her case and prospects before my mind.

I am inclined to think it would be good for all surgeons if they were forced to contemplate their "incurables" up to the final catastrophe, instead of being able, as at present, to relegate them to institutions for incurables, where they are out of sight and also out of mind. In my daily rounds I frequently saw this patient, and pondered much over her miserable state. She often stimulated my efforts by piteous appeals for relief.

One day I recalled to mind the case of a sailor aged about twenty-four years, who was admitted into the Workhouse Hospital nearly ten years ago, suffering from a badly set fracture of the left femur, and from a recto-vesical fistula that

had been produced, according to his account, during the reduction of the fracture. In his case the urine troubled him only in that he had to go to the closet more frequently, but he kept his bed dry, and his clothes were never soiled. In fact, we did not know about the fistula for a fortnight after his admission, and it was only when he was on the point of being discharged from hospital because we did not think it advisable to refracture the crooked thigh, that he told us about the fistulous communication. I closed the fistula, and he went out of hospital quite cured.

When I recalled the case to mind, my impression was that before the operation this patient was in a much more comfortable position than Mrs. D., and one likely to be less irksome to a woman than to a man, because the former live more at home and are, consequently, always nearer the usual conveniences. I explained to the patient that I had thought of an operation by means of which she would be able to keep herself dry, but that the proposed re-arrangement of organs would probably necessitate a frequent visit to the closet, and the having to get out of bed often during the night.

She said she was prepared for anything if by any means her infirmity might be removed, and I immediately commenced what I felt would prove to be a difficult task. I first attempted to fix the urethra into the wall of the rectum. To do this I released the upper or anterior surface of the urethra from its connection with the pubic arch, and then denuded completely the whole external surface of the urethra except a small piece round the orifice.

The third part of the operation consisted in making a slit into the rectum through the apposed vaginal and rectal walls, and through this slit the denuded urethra was drawn. The mucous membrane of the rectum was stitched by fine silk-worm gut sutures to the urethra close to its opening, and the mucous membrane of the vagina was also stitched closely around the urethral neck. A catheter was passed into the bladder through the anus and urethra, and retained in position. In this way the urine was drained into a receptacle as fast as it came into the bladder.



On the third day all was going on well, the bed was quite dry and the urethra apparently adhering to the rectal wall. The catheter was, however, producing intolerable irritation of the anus and had to be removed. The bowels moved and the rectum and urethra parted company. The slit into which the urethra had been stitched immediately closed.

A second similar attempt shared the same fate, although it seemed nearer a success before the connections broke down. The causes of failure were twofold: (1) The urethra tended to come forward to its original and natural position under the arch of the pubis, and (2) the movements of the rectum tended to withdraw that viscus from the rather forward position in which it was restrained by the stitches.

The third and ultimately successful attempt was made in the following way. The urethra was denuded in front and laterally only, and was stitched into the rectum in front and at the sides but not behind. The labia minoræ, clitoris and perineum, in fact, everything in front of the attached urethra were denuded up to the middle of the labia majoræ; and the whole vulvar region was then filled up completely by the labiæ majoræ being drawn into the space and united firmly to each other by numerous fine silkworm gut sutures. The urethra was thus pressed well back and firmly supported in its place, and the rectal wall at the same time held forwards by these stitches that passed through it.

A catheter was passed as before for three days, by which time the edges of the wound had adhered. The urine then flowed freely into the rectum and dribbled away every half hour or so upon the cotton wool placed to receive it. To make a long story short the labiæ permanently adhered to each other throughout the whole extent, and was quite water tight with the exception of a stitch track through which some urine trickled when she stood up. This track was rather difficult to close, but was finally healed through injecting into it daily an ointment composed of iodoform, carbolic acid and eucalyptus oil, so as to fill it completely. After injecting this for about a fortnight the sinus, to my great relief and satis-

faction, closed. I say relief and satisfaction, because I was afraid of making the sinus larger by operation and so spoiling what was already a comfortably satisfactory case, and yet the sinus just prevented the result from being as perfect as I would have wished. Its closure under the iodoform ointment has made the case perfect. Diagram No. 1 shows the natural condition of the parts concerned.

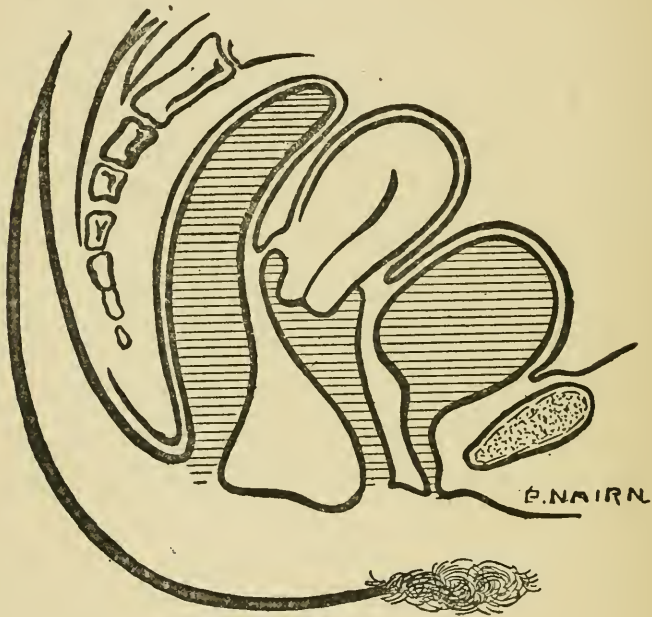


FIG. 1.

The next diagram (No. 2) shows the altered condition of this woman's urinary organs. She has only one external aperture instead of three. The urethra opens into the rectum and just behind the urethra is a small fissure through which any uterine or vaginal secretion may also find its way into the bowel. She has ceased to be unwell for about a year.

Externally the labiæ majoræ look as if they were quite natural, until on attempting to separate them their adhesion

to each other is found out and the cicatrix comes into view. On passing the finger into the rectum, the opening of the urethra can be felt with difficulty just above the internal sphincter. The difficulty of feeling it arises from the way in which the folds of the rectum cover it over. These folds seem so disposed that it would appear very difficult for gas to pass into the bladder from the bowel. The woman can now hold her urine for upwards of four hours, and has only to

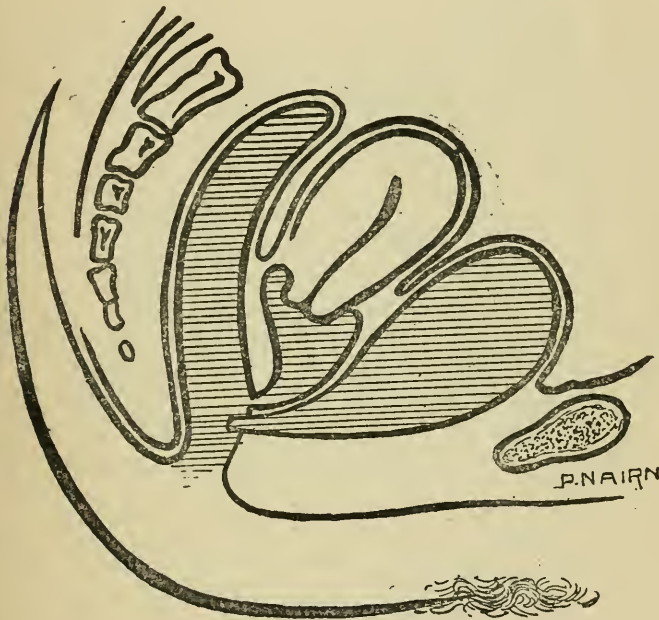


FIG. 2.

get up two, three, or four times during the night. She does not complain of any trouble arising from the entrance of air into the bladder. In fact the success far exceeds my most sanguine expectations. The only thing she complains of is pain along the intervulvar cicatrix and tenderness on touching it at one point, but the skin is quite natural and the pain is, I

believe, due to the withdrawal of morphia, of which she required a good deal during the long course of her treatment.

I cannot sufficiently commend the courage of this poor woman. That she underwent so many painful operations shows how miserable was her condition, and that she considered no means too desperate that offered any escape from it.

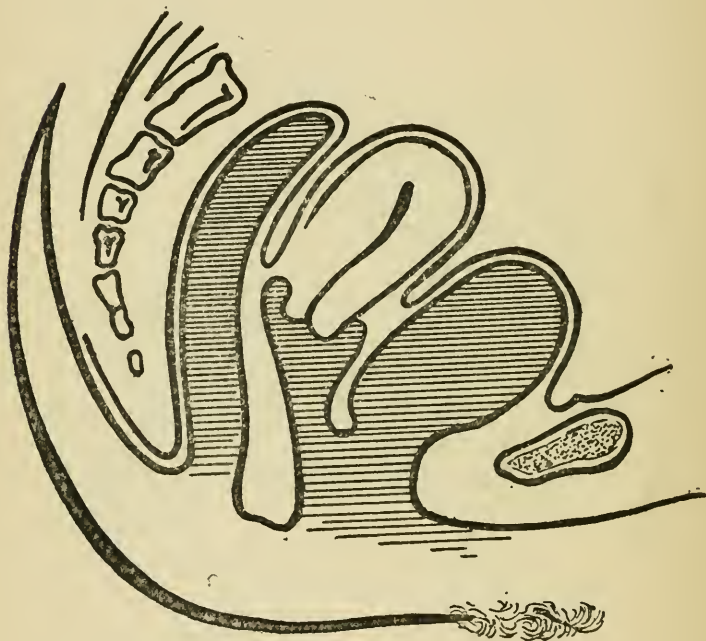


FIG. 3.

Whilst this patient was undergoing the attempt at relief which resulted in a cure, I had another patient, æt. fifty, in hospital, whose urethra had completely disappeared from sloughing. The sloughing arose from inflammatory action ensuing on an attempt to cure a cystocèle some two years before. The inflammatory action was caused by the indiscreetness of the patient who became maniacal after chloroform,



got out of bed and so irritated the wound that phagædenic action set in. A small piece of the urethra was then left, but a plastic operation intended to close the fistula, terminated through the same causes in a wider gulf and the complete destruction of the urethra. The physical condition of the pelvic region of this patient before operation is shown in the following diagram, where the urethra is absent and the bladder opens into the vagina by a wide gap.

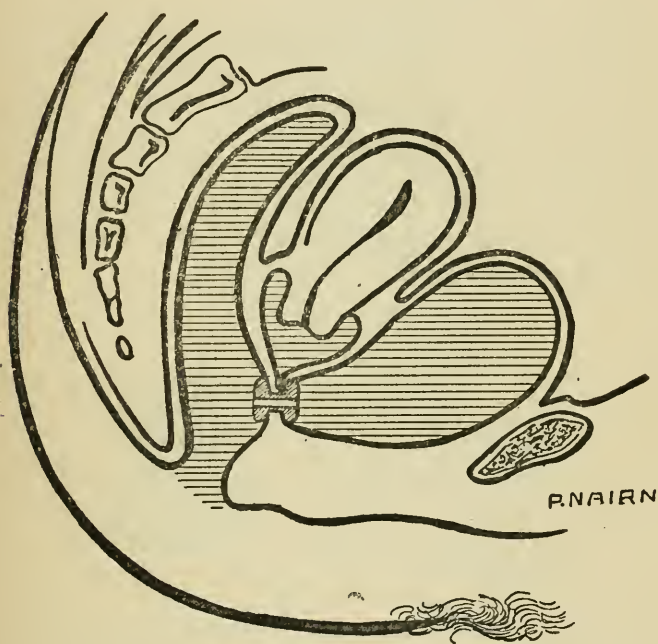


FIG. 4.

I tried to close up this woman's bladder anteriorly and to draw the bladder through the rectum, but the patient was utterly unmanageable, and soon after operation on two occasions, sent all the tubs flying about the ward and cleared herself as completely as the "Davenport Brothers" of all bandages and dressings.

When Mrs. D. turned out a success, Mrs. K. (whom we had in the meantime consigned to the crib wards) became very repentant and begged that another attempt should be made upon her. After some cogitation as to the best method, I performed the following operation on April 5th. The anus was forcibly dilated till the sphincter was paralysed. My left fore-finger was then placed on the trigone of the bladder, and the base of the bladder pushed backwards and downwards into the rectum by the finger, until it protruded the mucous membrane of the rectum into the shape of a cone rendered quite visible by a duck bill speculum inserted into the bowels. I cut down upon my finger from the rectum until the top of the finger appeared, I then substituted this part of the special vulcanite stud that I had made, into the place occupied by my finger, pushing it through until the threaded end appeared in the rectum; upon this threaded end I screwed the other end of the stud, and the communication between the bladder and the rectum was complete.



The labiæ minora were now separated from the labiæ majora all round turned in as seen in the next diagram, so as to turn their epithelial surface towards the bladder, and the labiæ majora were brought together over them thus apposing a double wall against the urine. Iodoform was dusted over the wound and plenty of cotton wool placed behind to absorb any discharge from the bowels. When the operation was finished urine was flowing freely into the rectum by the artificial aperture. The patient was very comfortable and all

went well for a week. A little oozing of urine appeared at a stitch aperture above and below. On attempting to catheterize the stud I found it quite blocked with calcareous matter and had to remove it. I have now a drainage tube into the bladder through the rectum which drains very well. The labiæ are united except above and below, and these

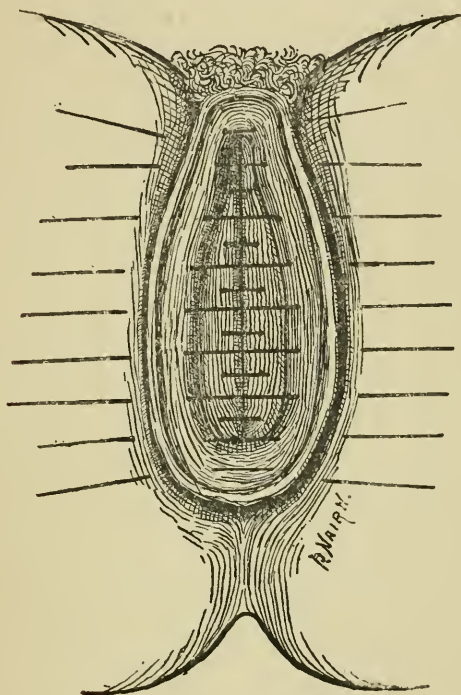


FIG. 6.

apertures are closing ; with a little more care I have no doubt the patient will become as great a success as her predecessor ; when complete, the condition of parts in the patient will be represented by this diagram.

One aperture only leads from the lower extremity of the body, namely the anus.

The bladder and vaginal walls are approximated above spot by the tube, which will be temporary until the anterior barrier is water-tight. If any trouble then arises with the tube it can be removed, and the urine can then be trusted to maintain the only aperture available.

The vagina and uterus open into the bladder and any secretion formed there will pass into the rectum through the bladder opening. The menses have long ceased, so that no discharge from that source need be taken into consideration.

*Remarks.*—The usual text books on surgery are silent upon any methods of relief, except urinals in the cases described; and I was surprised that no one seemed to have previously thought of utilising the anus sphincter to produce periodicity in the evacuation of the urine. In birds and monotremes the conditions exist, and these animals void their urine periodically with their fæces. But we are not always able to argue that conditions possible in animals will be so in man, and the case of the sailor put me on the right track, because his was a case in point. Of course his condition was inferior to the natural condition, and therefore his opening was closed, but in Mrs. D.'s case the new arrangement does not seem so very inferior to the old.

In looking through Ashurst's "System of Surgery" a few days ago, I stumbled by accident upon some operations similar to mine performed for extroversion of the bladder. At page 336, it is described how Messrs. Lloyd and Holmes tried to make a communication between the bladder and the rectum. The former used a seton with a fatal result from injury to the recto-vesical pouch of peritoneum. Mr. Holmes established the communication by means of a pair of screw forceps that caused a slough, and secured an aperture by the separation of the slough. Mr. Holmes, however, did not appear to pursue his success to the end. His artificial recto-vesical aperture seemed to close and the urine still flowed over the pubis; herein lie the chief difficulties of the operation. The bladder must be made quite water-tight everywhere, except at the aperture into the bowel. Nature seems



to work against us in two ways. The aperture into the bowel tends to close and the part that we want to close tends to keep open, and until these two things are done success will not crown our efforts.

In discussing this mode of treatment in ectroversion of the bladder, Mr. Harrison says :—

“Assuming that it is possible to establish the most complete and satisfactory communication between the rudimentary bladder or the ureters and the bowel, the degree of comfort which this arrangement would confer on the patient still remains undetermined whether the rectum is capable, in the human subject of adapting itself to the twofold office of bladder and bowel is, to say the least, problematical. In a case where the ureters opened into the rectum, the patient suffered from constant diarrhœa and irritation induced by the passage of urine into the bowel.”

I do not know what will be the result of the application of the method that I have described to cases of ectroversion, but I think it is no longer problematical as to whether the rectum is capable of adapting itself pretty fairly to the twofold office of bladder and bowel.

Mr. Reginald Harrison has kindly given me his reference to the case as it appears in Gross, on the “Urinary Organs,” p. 854. It is as follows :—

“Richardson has published, in the seventh volume of the Philosophical Society of London, the history of a youth who lived seventeen years without ever having micturated by the penis. He passed all his water by the anus, and the only inconvenience which he experienced was a slight but persistent diarrhœa.”

I have not been able to find the seventh volume of the Philosophical Society of London, but I think the evidence from this notice of the case quite accords with my own experience. A person who passes water by the anus six, seven, or eight times a day may be said to have “diarrhœa,” as probably a little fœces passes each time with the urine. As the “only” inconvenience was “slight” diarrhœa, I believe this

case was better than my own, and from it I anticipate longer retention in my two cases as the bowels become more and more accustomed to the urine. I hope at a future date to be able to record the more remote results of the operation which I trust will be still more favourable.

Dr. BANTOCK expressed his admiration for Dr. Alexander's patience and ingenuity. He said that it might be imagined that the presence of urine in the rectum would give rise to trouble, but it did not always or necessarily do so. Some ten years ago a patient came to him at the Samaritan Hospital, with a very bad sloughing of the bladder walls, and a large opening into the rectum. It was quite impossible to close either one or the other. He tried to diminish the size of the recto-vaginal fistula, which was as large as a halfpenny piece, but no tissue could be got anywhere. He then closed the vaginal outlet. The patient was still alive, and he had recently received a communication from her medical man, asking him whether he would take her into the hospital on account of some tumour, but he was obliged for various reasons to decline. There were many difficulties in the case when she first came under his care. The upper part of the rectum and vagina was filled with the hardest *scybalæ* he had ever seen, and he had had the greatest difficulty in keeping the bowels open. After the operation the difficulty was to get rid of the scybalous masses. The patient was sent home with a syringe to clean out the rectum as frequently as possible, and it was remarkable with what amount of comfort she had managed to live, at least in the interval.

Dr. AVELING said they could only admire the patience of Dr. Alexander, and the care and ingenuity which he had devoted to these distressful conditions. The first operation might prove successful, but in the majority of cases the urethra was not left intact—generally the greater portion of it was gone. He had endeavoured to treat several of these cases first of all by endeavouring to unite the vulva, with the same result, viz.:—that he never got perfect union. Then he had tried sewing up the mouth of the vagina. This was much

easier, but the great difficulties were, the formation of concretions in the bladder, and wherever the urine could arrive, and the closure of the artificial orifices which were made. This might be overcome to some extent, not by using a stud, which he was sure would have to be abandoned, but by constantly syringing out the bladder and using a dilator. Any operation was justifiable which could relieve women of this most loathsome of complaints.

Mr. LAWSON TAIT said there was nearly always loss of structure, rendering closure of the bladder an impossibility. The first time he saw the vulvar orifice closed on account of the destruction of the anterior and posterior vaginal walls was by Sir James Simpson in 1862, and he happened to be able to trace the woman's history afterwards. It was one of prolonged misery. What was reported as a "mild diarrhœa" amounted to irritation so excessive that the patient ultimately induced someone to undo the result of the operation. He had at present, a case in which he was endeavouring to close the vulvar orifice for a similar condition of things. But in one on which he had operated seven years ago, the patient had since had the operation undone she being unable to endure the condition of irritation of the rectum. In the second case he believed a somewhat similar condition of things had persisted. So far, therefore, the plan was an unsatisfactory one and patients were really not benefited by it. In spite of that he was attempting to close a third, in the hope that the condition of irritation might not be common to all these unfortunate wretches. If he found that the rectum would bear a mixture of fæces and urine, he would agree in the performance of Dr. Alexander's operation. As Dr. Alexander spoke, it occurred to him that a much better arrangement might be arrived at, by means of an operation requiring a little more mechanical skill, viz.; by turning the ureters into the rectum. He had three young women under his care, one of whom had paralysis of the urethra from rapid dilatation, and he thought he could dissect the ureters from the side of the uterus and turn them into the rectum. He said that Dr.

Alexander's operation unsexed the women with a vengeance. The removal of the appendages was nothing compared to it. He was surprised that it should have emanated from Liverpool.

Dr. MANSELL MOULLIN criticised the details of Dr. Alexander's operation. It was evident that the bladder, vagina and rectum inter-communicated with each other at the seat of operation. The patient therefore, was in no way benefited by the operation more than she would by the simple closure of the vulvar orifice and an opening made into the rectum. In either case the urine passed into the vagina.

Mr. LAWSON TAIT approved the objection which he said was fatal.

Mr. INGLIS PARSONS observed that Dr. Alexander's operations meant closing two openings instead of one.

Dr. AVELING said the stagnation of the urine in the vagina was a great objection.

Dr. ALEXANDER said that practically no urine went into the vagina at all. It went into the rectum and distended it. In reference to Mr. Tait's suggestion as to passing the ureteri into the rectum, he mentioned that two operators, Simon and Smith, had tried it, and in one case with the most disastrous results. Mr. Smith took one ureter into the rectum, it adhered, and then the woman had a good deal of renal disturbance for some months. When that had passed he diverted the other ureter, and then the woman died. It was found that the ureters probably got compressed at the point of entry into the rectum, which led to the formation of cystic kidneys. Mr. Simon's case was only partially successful.

The Society then adjourned.



*THE BRITISH GYNÆCOLOGICAL SOCIETY.*

WEDNESDAY, MAY 9, 1888.

ARTHUR W. EDIS, M.D., F.R.C.P., PRESIDENT, IN THE CHAIR.

PRESENT: 28 Fellows, 6 Visitors.

The following was elected a Fellow of the Society:—  
Dr. F. Wilson.

The following were proposed for election:—Dr. Henry William Powell, Dr. Ernest Henry Crisp, London.

Dr. FANCOURT BARNES shewed an infant, twenty-two months of age, the brother (or sister) of the person he had shewn at the last meeting. This child was the twelfth, and all the others, with one exception (the third), were normal. The appearances were absolutely identical with the subject shewn at the last meeting and curiously enough, the parents, as if to justify his employment of the word hermaphrodite, had decided, in the exercise of their own judgment, to bring up this child as a boy, whereas they had brought up the other as a girl. He remarked on the long interval that had elapsed between the reproduction of the same abnormality with the birth of several normally constituted children between.

Dr. BARNES said that the fact of a second child being born with the same abnormality showed the influence of heredity in these two cases.

Mr. RUTHERFOORD shewed a specimen of "infantile uterus," (congenital atrophy). It had been removed in the post mortem room from a girl, 18 years of age, who had never menstruated nor had any menstrual molimina or other sign, though well developed in other respects. In October, 1886, she had been admitted into the Brompton Hospital for bronchitis. In the following October she again applied for admission and was

then treated for phthisis and died the same month. Her father and mother died of consumption, as well as one sister. He said he had brought the specimen before the Society as shewing the effect of the tubercular diathesis upon the ovaries which were small. They contained a single layer of germinal cells in the cervix, deeply down the fibrous tissue was extremely thick, and deeper still they came upon connective tissue cells with what remained of the follicles. In thirty sections not a single healthy graafian follicle was to be seen, at the most mere cicatrices. The tunica fibrosa and propria, &c., were represented by a sort of hyaline membrane, and the membrana granulosa was represented by a single layer of columnar cells. In no case was the ovum perfect, being mostly fatty. He thought that this showed the effect of the tubercular diathesis upon the ovaries.

Dr. EDIS mentioned that on the previous day he had seen a patient who came under his care three years before, never having menstruated, although she had been married two years. She had a small, ill-developed uterus. He passed a sound and then a stem pessary. Soon afterwards she menstruated for the first time, at 26 years of age. She came back subsequently because the flow had again ceased, but the same treatment caused it to return. What the condition was in that particular case he was unable to say, as the patient was still living. He said he had had a number of such cases, and the presumption was that a reciprocal influence was set up by local irritation giving rise to menstruation which might be beneficial in promoting the further development of the organs.

Dr. BARNES said the question was one of great physiological and pathological interest. The case seemed to shew that the atrophy was connected with dysmenorrhœa. In many cases, however, girls disposed to be consumptive, by no means lost the sexual appetite or function. He said that the enquiry was one which ought to be proceeded with on account of the interesting light which it threw upon the pathology of the question. He observed that in the specimen the tubes and uterus did not appear to have been opened up

to shew their condition, but as far as could be seen there did not appear in them any tubercular affection. Some cases of amenorrhœa, thought to be due to neglect of the bowels, constipation, &c., might be due to an atrophic condition. If the ovaries became diseased in this way they could not expect the uterine functions to be carried on.

Mr. RUTHERFOORD, in reply, added that he had found a large number of epithelial nests, but that the diseased follicles were principally to be noticed. He said that clinically such cases were common, but that pathologically such observations were comparatively rare. He thought it was the diathesis and not the actual tubercular condition which brought about the change.

Dr. BANTOCK showed a fibroid tumour from a patient, a single woman, 37 years of age. The operation was performed on April 28th. There had been a difficulty about the diagnosis. The case had been sent in as one of ovarian tumour, but in the hospital it had been diagnosed to be a fibroid, and he himself had ventured to go farther and to assume that it was located in the broad ligament. He did so from the fact that the uterus was pulled up out of the vagina and could be felt on the right side of the mass. He considered the pulling up of the uterus to be a diagnostic sign of great importance. The operation was one of some difficulty. As soon as he cut down upon the tumour it was seen to be covered by peritoneum, but there was no close connexion between the two. He made an incision into the peritoneal envelope and was enabled to enucleate the mass. But it was not till he had removed the tumour that he found out the relation of the parts. The tumour had evidently grown from the left aspect of the uterus, and in its growth the uterus had revolved from right to left so that the left ovary had been carried over to the right side. This had led him in the first instance to mistake the left ovary for the right, but he subsequently found them both lying together. The connexion with the uterus was simply scraped through with the handle of the scalpel and a number of bleeding vessels were tied on

the surface of the uterus. The sac was attached to the abdomen wound and drained. The result, so far, had been very satisfactory and there had not been a bad symptom. The track of the drainage tube was not quite closed but was very nearly so. No elevation of temperature. It was not often that one had a fibroid tumour with these connexions.

Dr. EDIS observed that the patient had been sent in as a case of ovarian disease. He had removed a *fac simile* from a girl only 23 years of age. That case had been diagnosed as ovarian, and it so far resembled it that they were quite justified in opening the abdomen to search for it. The patient did perfectly well. He mentioned that there was nothing in the way of dysmenorrhœa or amenorrhœa, to assist in the differential diagnosis.

Dr. ROUTH asked for some information as to the etiology. He said there was nothing in the history which would lead them to explain the cause. He asked whether the patient was married and whether she had been addicted to what, for modesty's sake, he called 'imprudent habits.'

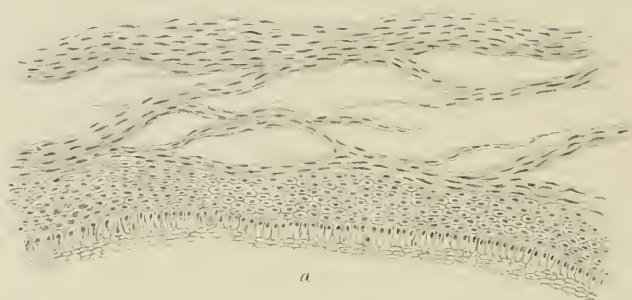
Dr. EDIS said that in his own case the patient was married. Her husband had died a fortnight before, and he knew of no special proclivities.

Dr. BANTOCK, in reply, confessed that he was in perfect ignorance of the etiology of fibroid tumours in general, and of this case in particular. He said he knew nothing that would lead one to suppose that any one thing would give rise to such tumours more than another. As to the so called 'imprudent' habits he thought his patient was the last in the world to be suspected. So far as he was aware they had no notion as to the formation of fibroid tumours. The tumour he had removed was soft and had an amount of elasticity about it which might very well have been mistaken for fluctuation. He had omitted to mention that there had been no menorrhagia at all, but he had lived long enough to know that hæmorrhage was not an infallible symptom of fibroid tumour.

Dr. BARNES said that the occurrence of hæmorrhage in connection with fibroid tumours depended upon their relative







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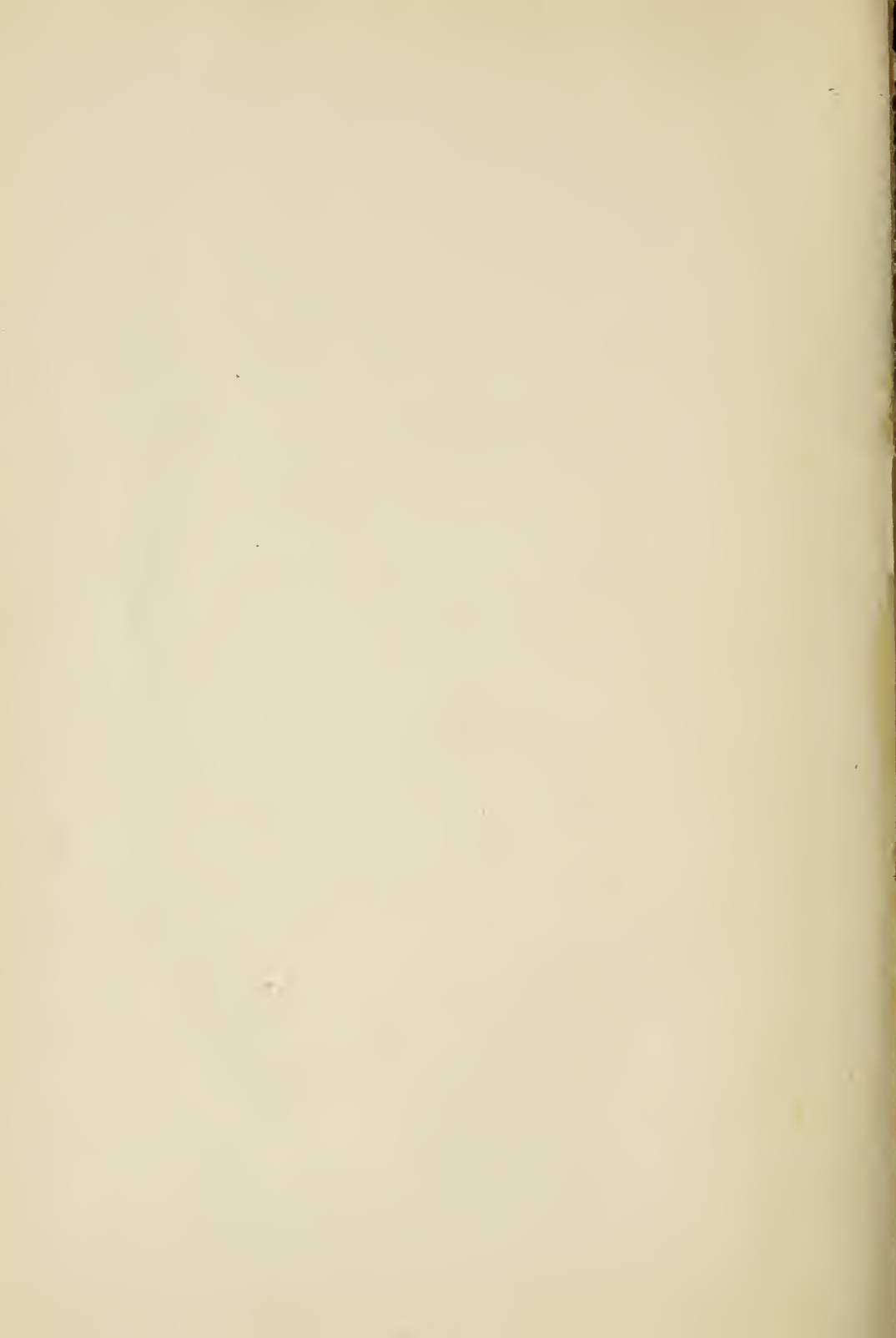
*b*



*c*

#### EXPLANATION OF PLATE.

- a* Section of the wall of a Graafian follicle, from the ovary of a mare, shewing the arrangement of the cells.
- b* A portion of the wall of an ovarian cyst, to shew the mucous glands.
- c* A section from an ovarian dermoid shewing the large size of the sebaceous glands. A few sweat glands are also seen in section.





seat in the uterus. If the tumour encroached upon the interior of the uterus, then there would be hæmorrhage, and also if it grew into the body of the uterus, whereas if it projected from the external wall, then hæmorrhage did not take place.

Mr. RUTHERFOORD asked what were the chief clinical symptoms.

Dr. BANTOCK replied, the rapid growth of the tumour and simple discomfort. There were no very definite clinical symptoms.

*Report on Dr. Bantock's specimens of Ovarian Dermoids.*

By J. BLAND SUTTON, F.R.C.S.

IN the early part of this year I received from Dr. Bantock several ovarian dermoids. During the same period many other tumours of a similar nature were placed at my disposal in a recent condition, and before they had lost their tissue-life. This material has been utilised by me in an investigation which I have been conducting into the nature of teratomata generally. I have in consequence transformed what is nominally a "report," into a small monograph concerning the pathological anatomy of ovarian dermoids, with an especial attempt towards elucidating their mode of origin.

The method adopted was the following :—

I. To ascertain, if possible, the portion of the ovary in which dermoids arise.

II. To find, and trace, if possible, intermediate characters between dermoids and other forms of ovarian cysts.

For both purposes it was absolutely necessary to receive fresh material and to be able to deal with the specimens as freely as one could wish.

The human ovary, and indeed that of most, if not all mammals, consists of three distinct parts, each giving rise to cysts presenting distinctive features.

These cyst-regions are :—

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R

1. *The Oöphoron.* This is the region in which ova are found.
2. *The Paroöphoron.* This is termed by a few authors "the tissue of the hilum." It is composed almost entirely of mesonephritic remains (Wolffian body) in varying stages of retrogression.
3. *The Parovarium.* This represents the segmental tubes and duct of the mesonephros, and consists of three parts. A. *Kobell's tubes.* B. *The vertical tubes* of the parovarium. C. *Gartner's duct.*

These three parts can easily be made out in the human ovary, and in the ovary of many of the higher mammals, but the proportion of the parts to each other vary considerably in different groups, and at the present time I am engaged in investigating this question.

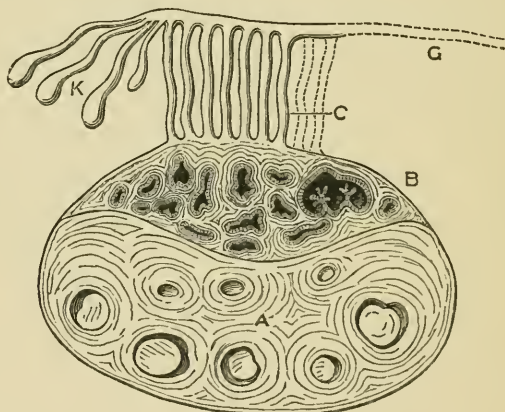


FIG. 1.

A diagram representing what may be called the *cyst regions* of the human ovary. A, Oöphoron, B, Paroöphoron, C, Parovarium, with K, Kobell's tubes and G, Gartner's duct.

These various parts are diagrammatically represented in fig. 1. The cysts which arise in connection with the ovary and parovarium may be conveniently arranged in three groups according to the region in which they arise:—

1. *Oöphoron*. Unilocular Cysts. Multilocular Cysts. Cystic corpora lutea. Dermoids.
2. *Paroöphoron*. Papillary (proliferous) Cysts.
3. *Parovarium*. Parovarian Cysts. (A.) *Kobelt's tubes*. Pedunculated Cysts hanging from the broad ligament.

My first efforts were directed towards ascertaining the relation of dermoids to these three regions of the ovary. In all the examples of ovarian dermoids dissected for the purpose, it was easy to demonstrate that the parovarium was unconnected with them, but in several cases this structure differed in minor particulars from the usual arrangement of the tubules. Another interesting fact was the frequent association of malformation of the Fallopian tube with dermoids. In some cases there was an accessory abdominal ostium ; in others the tube would have no abdominal opening whatever.

These conditions have but little bearing on the pathology of ovarian dermoids, for they seem to be quite as frequently associated with other forms of ovarian cystomata.

It now became necessary, seeing that ovarian dermoids have no connection with the parovarium, to ascertain as far as possible to which district of the ovary they belong. When a cyst attains a large size this task is an impossible one, but in dermoids of the size of a walnut, and sometimes when they are as large as an orange, it is easy to shew that they originate in the oöphoron, and a series of observations carried out for this purpose has had the result of convincing me that ovarian dermoids arise in the same portion of the ovary as multilocular cystic tumours. These cysts arise in Graafian follicles, and it is my intention to procede to shew that ovarian dermoids also arise in these follicles.

Having localised the situation of ovarian dermoids to the oöphoron, the task became simple, but laborious, for it involved a large amount of histological work.

The best mode of demonstrating the origin of multilocular cysts in the oöphoron is to make a section of the ovary of an

old mare, as in fig. 2. The paroöphoron in this mammal is very large, and easily distinguished; the parovarium is represented by a cluster of tiny cysts, underlying the abdominal end of the oviduct. The oöphoron is invariably occupied by some dilated follicles, cystic corpora lutea, or both. The dilated follicles are easily distinguished microscopically in their early stages from cystic corpora lutea, as the former exhibit the well-known membrana granulosa. Cysts arising in corpora lutea probably rarely attain very large proportions. They occur very frequently in the cow, mare, and occasionally in the human female, and probably in the ovary of other mammals.

In the early stages cysts arising in corpora lutea are easily recognised without the aid of a microscope, on account of the peculiar yellow tissue which forms the wall of the cyst.

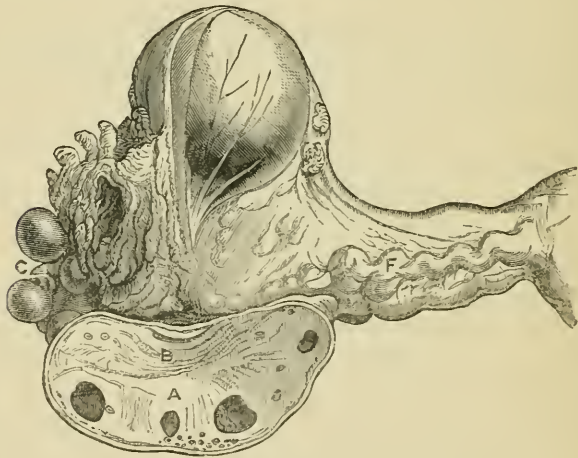


FIG. 2.

The ovary of a mare. A, Oöphoron, B, Paroöphoron, C, Parovarium, F, Oviduct. The abdominal end of the tube is stretched by a large parovarium cyst.

The multilocular cystic tumours arise in dilated follicles, and a typical specimen is shewn in fig. 3. This tumour was taken from a mare, and weighed 84 lbs. The cysts are con-



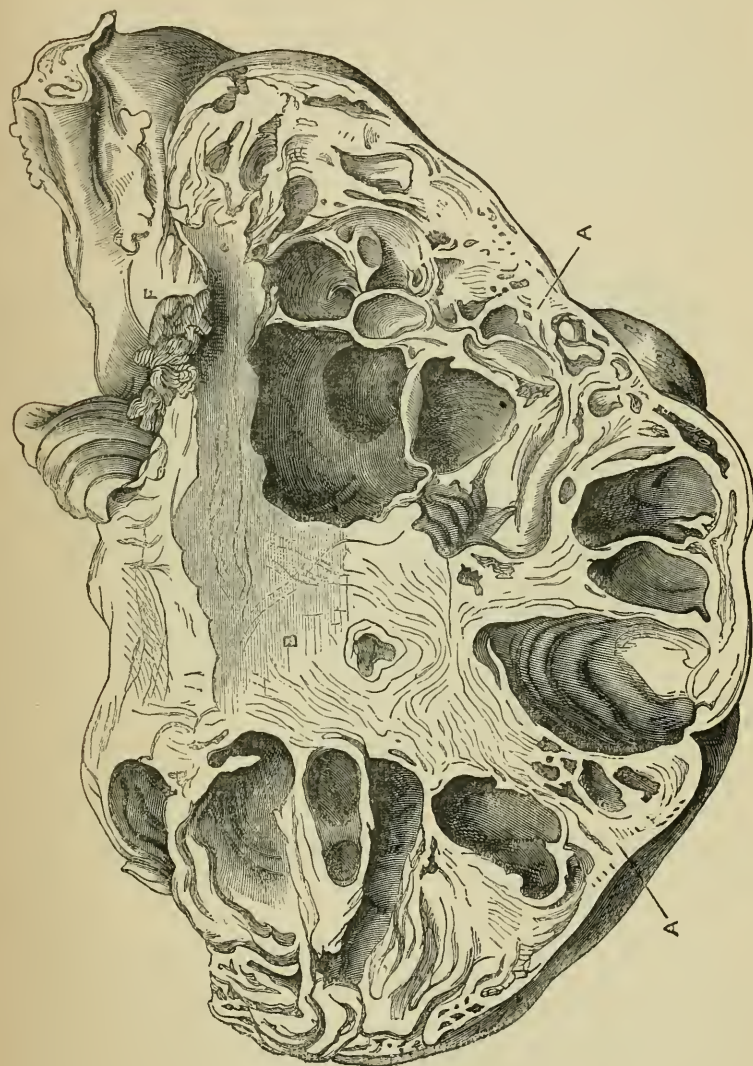


FIG. 3.

Transverse section of an ovarian tumour which weighed 84 lbs. A, Oöphoron, B, Paroöphoron, F, Extremity of the Fallopian tube.

fined to the oöphoron, and many of them exhibit glandular tissue in their walls. The paroöphoron is considerably enlarged, but contains no cysts. It is easy to understand why the distinction is so obvious in this case between the two parts of the ovary, because, as has already been mentioned, in the normal mare's ovary the paroöphoron is relatively very large; in the adult human female it is relatively as well as absolutely small.

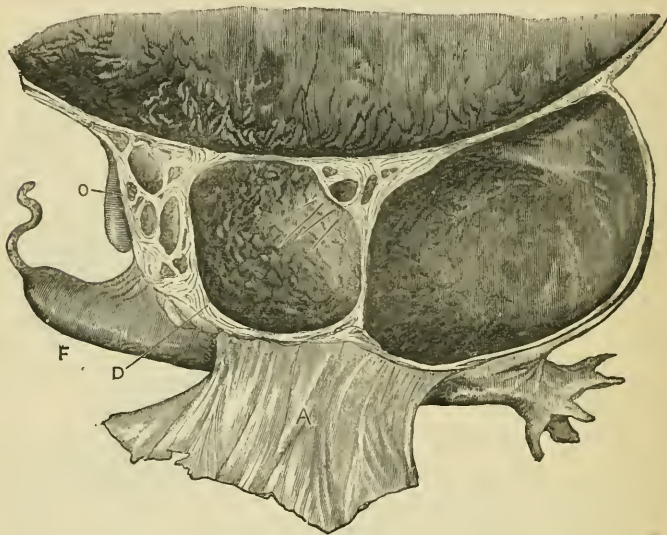


FIG. 4.

A section of the pedicle of the tumour. O, Ovarian tissue with cysts. D, Dermoid with glands and hair. F, Fallopian tube. A, Omentum. *See this JOURNAL, Part XI., p. 362.*

As we are able definitely to determine the origin of oöphorite cysts in general from the Graafian follicles, it is necessary that we should compare their histological features with dermoids and analyse their points of agreement and difference. When an ordinary oöphorite cyst is compared with a typical dermoid the difference is very striking. In the simple non-dermoid ovarian cyst we find the interior lined by

a single layer of flattened epithelium, and this may be difficult of detection. The dermoid, on the other hand, may present skin, hair, sweat and sebaceous glands, teeth, and even a mamma.

Should the non-dermoid ovarian cyst be multilocular the individual cavities may, if not too large, present a *membrana granulosa*; in the dermoid the loculi are lined with skin. furnished with hair, &c.

Occasionally we find a multilocular ovarian cyst and one little loculus may present a small patch of piliferous skin. Such a combination is far from rare. Fig. 4.

If we select a highly organised multilocular ovarian cyst, and one of the simplest ovarian dermoids, we shall find that in complexity of tissue the former far exceeds the latter. The glandular cyst presents us with the most perfect columnar epithelium, which not only covers the interior of the cyst but dips into the underlying tissues and forms mucous glands of great complexity, and when suitably stained forms striking objects under the microscope. Between cysts, lined with simple flattened epithelium, and those presenting glandular masses, every gradation may be traced. The lining membrane of some of these cysts is indistinguishable from mucous membrane.

The cystic spaces, described by Dr. Wilson Fox in his well-known paper,<sup>1</sup> as being formed by the coalescence of adjacent papillæ, are, as a matter of fact, in most cases acini of mucous glands. The larger ones are retention cysts, and are analogous in structure to similar cysts occurring at the cervix uteri and in connection with the labia. It may also be mentioned, as tending to show the close connection between ovarian glandular cysts and dermoids, it is no unusual thing to find mucous cysts in the smaller loculi in the walls of dermoids. We must now proceed to consider the simplest form of an ovarian dermoid. If a cyst in the ovary presents the smallest piece of skin, furnished perhaps with only two or

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<sup>1</sup> *Medical Chirurgical Transactions*, vol. xlvii. p. 227.



three hairs, its dermoid character is established. The presence of a tooth without any skin is sufficient.

As a matter of fact every gradation may be traced from the membrana granulosa of an ovarian follicle to the glandular cutaneous lining of a dermoid. In some specimens the epithelial investment is indistinguishable from that lining a unilocular cyst, yet in one small portion of the cyst wall a few hairs on a patch of skin place them in the category of dermoids.

In fig. 5 a section of an ovarian dermoid is shown, in which four teeth were present, but though sections were made from many portions of the cyst wall no cutaneous elements could be detected, though examined repeatedly by the microscope.

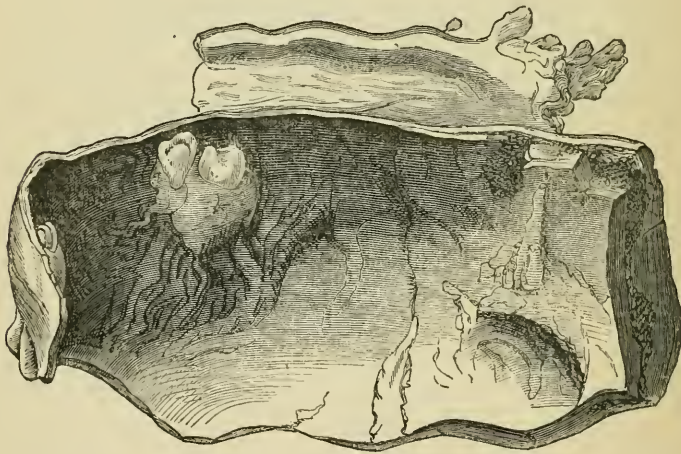


FIG. 5.

Portion of an ovarian cyst containing teeth, but no skin elements could be found microscopically.

In another specimen the cyst was as large as a melon, and a patch of skin the size of a gooseberry, furnished with a lock of hair twenty inches long, and innumerable sebaceous glands, was the only evidence of cutaneous tissue. Sections





FIG. 6.

An ovarian dermoid  
with a lock of hair twenty  
inches long.

taken from the wall of this cyst, away from the neighbourhood of the hairy patch, were indistinguishable from a simple ovarian cyst. The microscopical characters of the skin in this specimen are shewn on plate II, fig. c.

Thus far we know that ovarian dermoids resemble non-dermoid ovarian cysts in that they usually consist of one large cyst surrounded by numerous smaller ones. We have already seen that a multilocular cyst of the ovary may present only one tiny patch of dermoid tissue, though the tumour is composed of a multitude of cavities great and small. There are good grounds for the belief that if all multilocular ovarian tumours were systematically examined, patches of dermoid tissue in the cyst would be found to occur with very great frequency. Lastly, an ovarian dermoid may be multilocular, all its cavities presenting skin, hair, or teeth, or all three structures in the same cyst (fig. 7).

Thus in the general disposition of the cavities, single, multiple and mixed, dermoids and non-dermoid ovarian cystomata are in agreement.

The most highly organised ovarian dermoids are those which contain a well-developed mammary gland capable of secreting a fluid resembling milk. The most remarkable specimens of this nature that has yet come under my notice occurred in a cyst which Dr. Bantock sent me, and will be fully described in the *Transactions Pathological Society*, Vol. xxxix.

In plate I three drawings are given representing the epithelium lining, a normal Graafian follicle ; its disposition in a multilocular cyst of the ovary, and in a complex ovarian dermoid. The microscopical appearance of the acini of the glandular tissue taken from an ovarian dermoid is given in fig. 7. In this case the tissue not only resembled the normal mamma in shape and appearance, but also in the

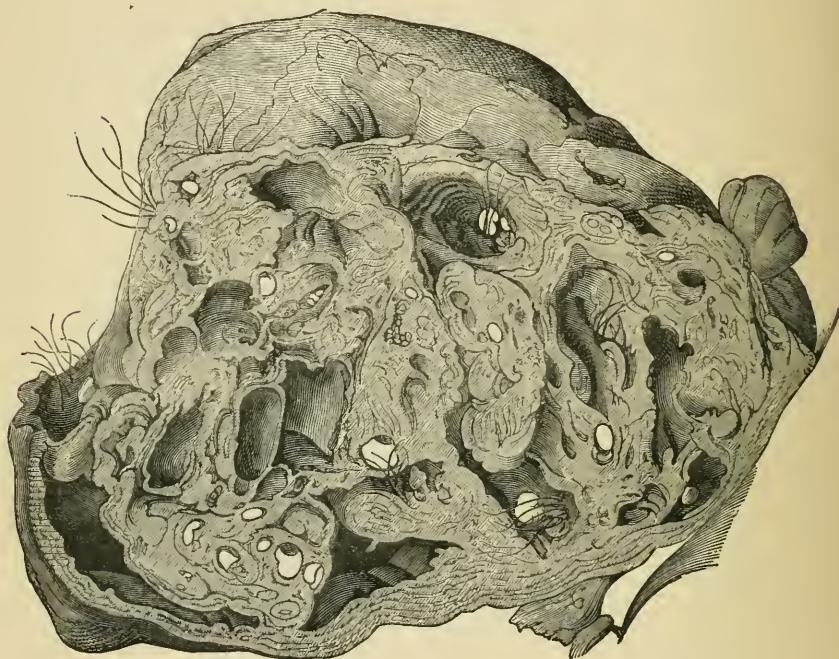


FIG. 7.

A multilocular ovarian dermoid tumour.

arrangement of its ducts and acini, as well as in the shape of the epithelium lining the recesses in typical cases. In well-marked cases the mamma may even furnish a fluid presenting all the physical and microscopical characters of milk.<sup>1</sup>

<sup>1</sup> For further details of these mammæ, see *Pathological Transactions*, vol. xxxix.

The histological characters of the skin found in ovarian dermoids differs in many ways from that covering the exterior of the body. The epidermis is extremely thin, and it is rare to find papillæ. The sebaceous glands are of very large size and many of them very dilated, as though there had been difficulty in getting rid of the secretion. Sebaceous retention cysts are not uncommon; the sweat glands do not present the twisted ducts with which we are so familiar in true skin. The hairs too, for the most part, are of very simple structure and resemble lanugo.

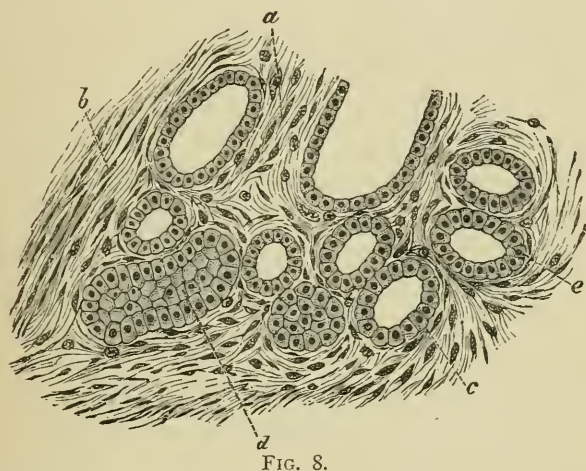


FIG. 8.

*a*, Connective tissue. *b*, Unstriated muscle fibre. *c*, *d*, and *e*, Acini and ducts lined with cubical epithelium.

The histological characters of a mamma from an ovarian dermoid (after Velits).

One of the first objections which, I can foresee, will be urged against the opinions put forward in this paper is this: It is contrary to ordinary teaching that the epithelium of a Graafian follicle is capable of undergoing such variety of shape. But epithelium may change its characters, and a ready method of demonstrating it exists in uterine myomata. When a sub-mucous myoma projects into the uterine cavity its surface is covered with columnar ciliated cells. If later the tumour pro-



trudes beyond the vagina, the surface cells will become stratified, whilst those cells lining recesses in the mucous membrane of the exposed parts retain their columnar ciliated condition.<sup>1</sup> Similar changes may be studied in the mucous membrane covering the surface of piles.

Again, no one who has studied the anatomy of the various forms of ovarian cystomata can doubt that the multilocular cystomata arise in Graafian follicles. Yet it would be difficult to distinguish between the epithelial lining of many multilocular cysts and the epithelium of a mucous membrane, even to its glandular recesses. If such a complex cyst as this can arise from a Graafian follicle, surely we cannot deny the origin of a dermoid from the same source, for skin and mucous membrane are fundamentally identical. Skin covers the exterior of the body, has sebaceous glands, and is furnished with hair. Mucous membrane lines the internal cavities of the body, and has mucous glands. In some mammals, the hare, the buccal mucous membrane is furnished with hair on the inside of the cheek. On the other hand, mucous membrane may have sebaceous glands, as, *e.g.*, that covering the nymphæ.

In order to obtain teeth in a cyst lined with mucous membrane we need calcify some of the cellular projections, and a dermoid is the result.

Calcific patches and cartilage are not peculiar to dermoids, they have been seen in non-dermoid ovarian cysts. Finally, although there are striking differences between simple ovarian cysts and complex dermoids, nevertheless the difference between a complex ovarian cyst and a simple dermoid is practically *nil*, and, as a matter of fact, the glandular ovarian cysts are often structurally more complex than many dermoids, and I see no escape from the conclusion that *ovarian dermoids, like oöphoritic cysts in general, originate in Graafian follicles*. The chief reasons may be summarised as follows:—

I.—The localisation of multilocular cysts and dermoids to the oöphoron.

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<sup>1</sup> See *Gervis, Obstetrical Society Transactions*, 1887.



II.—The frequent association of a dermoid with a multilocular ovarian cyst.

III.—The extreme frequency with which dermoids occur in the ovary can only be accounted for by some functional peculiarity. The only peculiarity it possesses in this respect is the formation of Graafian follicles.

IV.—Transitional stages can be traced from the membrane granulosa to mucous membrane, mucous glands and teeth on the one hand, to skin, glands, hair, teeth, and mammæ on the other.

It must be borne in mind that a distinction exists between dermoids occurring in such situations as the angle of the orbit, tongue, neck, &c., and ovarian dermoids. Finally, it is high time that some explanation should be offered to account for the origin of ovarian dermoids, which shall be more satisfactory than such expressions as :—*Fœtus in fœtu*, *pan genesis*, *parthenogenesis*, *excess of formative nisus*, *hypererchesis*, and other guesses, equally vague and unsupported by facts.

N.B.—My investigations are still in progress, and I should be pleased to receive fresh dermoids from any surgeon who will kindly forward them to me.

Dr. BANTOCK expressed his high appreciation of the clearness and lucidity of Mr. Sutton's remarkable exposition. The pathology of ovarian tumours had been hitherto about the most hopeless muddle of anything connected with the profession. He knew of no book treating of the subject of the pathology of the ovary in which that part of the book was worth the paper on which it was printed. Nothing could be more confusing or more unintelligible. Mr. Sutton, however, had given them an exposition of views which they could understand, which were simple in their conception, and which commended themselves to their common sense. He felt sure that they would prove to be the correct explanation of these very remarkable things, dermoid cysts. If the pathology of the ordinary ovarian tumour had been a puzzle, the pathology of dermoid tumours had been vastly more puzzling. Such

words as parthenogenesis, &c., were only cloaks for ignorance. He was not a pathologist, but he really felt an interest in having something brought before his mind which he could understand. He could not refrain from referring to one of these theories to account for the formation of cysts, and that was the theory of the late Wilson Fox, in which tumours were supposed to result from union of papillæ, that is to say, the coalescence of a number of papillæ. He asked whether anything could be more far-fetched than such an idea.

Dr. DICKINSON observed that Mr. Sutton had drawn attention to the formative power of epithelium in the pathology of ovarian cysts; he mentioned, for instance, that a tumour growing from the uterus was first covered with ciliated epithelium, and on passing down through the cervix had become covered with stratified epithelium. He himself had seen a case of a negress in whom an elongated cervix projected some distance through the vulva. Inside the vulva it was covered with simple pink mucous membrane as usual, but outside it was skin-like in appearance, and intensely black like the rest of her skin, shewing that epithelium might not only alter its character as regards its form, but might even take on an abnormal formative power in the deposition of pigment.

*On Cystic Disease of the Cervix and Endometrium.*

By RICHARD T. SMITH, M.D.

THE subject of this clinical paper is the frequent association of cystic disease of the cervix with what is termed "cystic endometritis," the chief feature of the latter being the existence of papillomatous growths, or tags, or small polypi, all of a true adenoid constitution, in the interior of the uterus. By cystic disease I do not mean the superficial distended follicles which often co-exist, but real cystic degeneration of the deep structures of the cervix.

Four brief cases will serve as illustrations :—

*Case 1.*—Mrs. S., aged 44 years, the mother of three children,

the youngest being 7 years old. Four years ago she had a miscarriage at the third month. Last autumn she consulted me on account of severe backache, with the history that the catamenia now occurred at rather longer intervals than usual, the last one being six weeks; that the flow was also more scanty and in a measure replaced by a watery discharge. Note taken: Os rather patulous, tissue of cervix hard and uneven; a rather hard mass the size of a marble is felt about half an inch up the cervical canal. I concluded that this was in all probability a sessile polypus, and as I was going for my holiday I gave her an ergot mixture, with instructions to come again a month later. This she did, informing me that now severe bleeding, lasting several days, had set in, and that she was losing flesh and strength rapidly. Examination revealed but little change beyond some enlargement of the swelling, and that the os now admitted the finger. On proceeding to operate some days later, I found the cervix studded with cheesy follicles, and the presumed polypus proved to be one mass of conglomerated cysts charged with glairy contents. I cut off the projecting portion, leaving a base honey-combed with the divided cysts.

The whole of the anterior cervical wall was invaded. Before proceeding further I curetted the interior of the uterus and removed numerous so-called papillomatous, small fleshy tops. To this I applied iodised phenol and then thoroughly attacked the cystic wall of the cervix with the actual cautery.

The patient had no bad after-symptoms; temperature and pulse remaining perfectly normal. About the tenth day the cervical surface had become clean of sloughs, and I applied strong iodine to that and the interior. From that time the patient has had no treatment whatever and seems perfectly well; menstruation has been regular and normal. I may state in passing that the patient's mother died of carcinoma uteri.

*Case 2.*—Mrs. M., æt. 43 years; has had two children, the youngest being 13 years old. The patient is stout and well built, but for the last six years has been almost a complete invalid

through menorrhagia, backache, and inability to walk. "She does not think she has walked a distance of two miles at once for the past six years." Frequently she is not more than one week in a month clear from bleeding to some extent, and this is accompanied with little shreds and clots, *i.e.*, the uterus is large and flabby, measuring four and a-half inches; there is slight retroversion. The cervix is large and decidedly of the mushroom type, that is the labia are everted and bulky, and expanded from the body of the cervix with marked induration of the right half of the anterior lip. Sounds pass easily to No. 13 and reveal rough places in the interior. Per speculum: The everted labia are studded with prominent follicles, from which on puncture a clear glairy fluid exudes. By Recamier's curette numerous small fleshy looking growths from one-sixth to one-eighth of an inch long are removed with smaller masses of a reddish gray colour and of a much looser texture. Patient objects to any operative treatment.

*Case 3.*—Notice the age. Mrs. B., æt. 52 years, has had seven children, the last twelve years ago. She states she had a flooding with the fifth and two successive labours. There has been no sign of the menopause, beyond the fact that the periods for the past two or three years have been in alternate months, but the loss has been free, persisting for a whole week. Leucorrhœa slight, backache severe. Uterus three and a quarter inches long, cervix very large, both labia studded literally with scores of follicles, prominent and ejecting cheesy contents on being punctured. This was a very definite case of bilateral laceration, and the question of age raised some doubt as to the expediency of doing a plastic operation (a doubt I may say now completely dissipated, as I have done a fair number at and beyond the fiftieth year with the most gratifying results). Iodine, glycerine, in fact all medicinal aids utterly failed to give any relief to symptoms, or to conquer the follicles, and I therefore adopted Emmett's plan. The surfaces of the labia cervicis were quite two square inches each, and on removing the mucous membrane I found a perfect nest-work of cysts, one large enough to hold half-a-



drachm of fluid. (In one case I did in a lady, aged 53 years, I found a cyst that admitted the tip of my little finger.) Of course this necessitated a deeper excision of the tissues than usual, and even then I was not rid of the honey-combed condition; I therefore scraped the surfaces thoroughly before bringing them together. The result was pleasing, and a cervix resulted which could be satisfactorily seen in its entirety by a medium sized speculum, whereas, previously, it was impossible to see more than one lip, and that only in part. So far, good. But to my intense annoyance she came back in two months' time to say that while the leucorrhœa was absolutely cured, and the pain greatly relieved, the menorrhagia persisted. The cervix was all right, a few follicles could be seen about half-an-inch away from the os, showing that I had not pared the surfaces to a sufficient extent. On passing the sound I felt the prominent intra-uterine growth, and learnt the extreme importance of what I find Martini, of Berlin, carefully observes, viz., before repairing the cervix, in any way thought best, be sure the interior of the uterus is cleared of all fungosities so termed.

*Case 4.*—Mrs. W., æt. 33, three children, youngest three years old, widow two years, sought relief from the pain in the back and hips at the middle of the month, the spasm at the time being worse than labour and relieved immediately by the escape of a copious offensive discharge.

An eminent London doctor said she had an abscess of the ovary after her confinement, with this as a consequence.

*Note.*—Ut.  $3\frac{1}{2}$  in. long, anteverted very much, quite mobile, right cul de sac absolutely free, in the left a very slight thickening. Cervix lacerated. By Emmett's operation and a stem great relief was obtained, the uterus being reduced to  $2\frac{1}{2}$  in., and the pain removed. Still the discharges continued. Again I found the mucous membrane at the fundus very sensitive and rough, the patient affirming "that hurts my back," as the sound touched that portion of the uterus. Curetting and mild caustics have completed the cure to this extent, "she has not felt so easy for years, and the discharge has disappeared."

These cases exemplify the two main clinical features, menorrhagia and pain, and one other not so constant, but sometimes well marked, viz., intercatamenial discharge of a mucous or muco-purulent character. The menorrhagia has one or two characteristics: (a) It is frequently very excessive. Sir James Simpson records one case which proved fatal in a young woman, where the post mortem revealed only a small polypus the size of a pea in the uterine cavity, and I have seen several where the hæmorrhage poured away as from a ruptured vein. (b) It comes in gushes, and the sensations are evidently such that the patient can often distinguish it; as one expressed to me, "I am not unwell, but I bleed inside; I feel something filling and then it bursts." In other cases there is a long-continued slight oozing and then a "rush," as another patient described it. (c) And very important, it is protracted late in life, and in this respect it forms one of the most essential features in suggesting and then being discriminated from cancer. Dr. Barnes mentions one clinical fact which I have often corroborated. In cases where late in life menorrhagia supervenes after months of menopause, the assumption is that the cause is cancer; where metrorrhagia persists without the expected menopause most probably the cause is cystic endometritis. This is a valuable rule to remember, though not absolute.

*The Pain.* I am sure one feature of cystic endometritis with cystic degeneration of the cervix is severe backache. The task of associating certain pains with varied uterine and ovarian disorders I have given up as almost hopeless, but here anyhow is one fairly pathognomonic.

"My back is so very bad;" "The back aches so;" "My spine is so sore;" "Can't you relieve this tearing pain in my back;" "The pain in my back and hips is worse than labour;" are various descriptions given by the sufferers. Of other general discomforts, as bearing down, and weariness and exhaustion, I need not say anything. The uterus is almost always enlarged, sometimes very much so, even to  $3\frac{1}{2}$  or 4 inches; some degree of alteration of shape also is very

common, anteflexion being more frequent than retroflexion or version in my experience.

*Pathology.* "Cystic endometritis" (an unfortunate name), is perhaps the most common term applied to these intra-uterine degenerative changes. The objects found are described as "granulations" fungosities, these masses containing many blood vessels, especially veins, and bleed at the base where they undergo fatty degeneration; or they may constitute mucous polypi varying in size within a very wide range. In other cases they are small round masses lying beneath the mucous membrane, resembling "elastic grains" in touch, and varying from a pin's head to a filbert in dimension.

The most modern teaching considers all these varieties as but different stages of an adenomatous change of the mucous membrane; the solid bodies being composed of mucous gland tissue covered with epithelium; the cysts arising from closure of the ducts, not simply by obstruction with subsequent accumulation of contents in the gland, but (Coats) the cyst arises in the duct of the gland, the latter persisting and pouring its secretion into the cyst. If the obstruction be partial or temporary the cyst may subside and refill again and again. Another element in the process of enlargement is the power of mucin to swell up by the absorption of water.

Dr. Norman Dalton has furnished me this microscopical account of a piece of cervix removed in Emmett's operation.

*Half-inch* objective. Large number of small cysts scattered through the muscular bundles and connective tissue of the cervix.

*Quarter-inch.* The cysts are filled with a hyaline substance in which minute granules are scattered. The majority of the cysts show evidence of having been lined by cells as the nuclei are collected at the periphery. It is difficult to make out the outline of the cells to which these nuclei belong as the protoplasm has degenerated, but in a few instances (diag. B.) they are seen to be distinctly columnar. It would, therefore, appear that the cysts had the same lining as the glands of the cervix, and as they lie most abundantly at the free edge of

the cervix, we may suppose they have developed as acini from those glands. These acini have penetrated into the substance of the cervix and lost their outlet. Muroid degeneration of the cells has thus occurred, with the result that the acini have dilated into cysts. The substance within the cysts gives the same appearance under the microscope as mucin, and in a few cases large round hyaline cells can be seen shewing the transformation.

The other point of interest is the open-work condition of the cervical tissues round the cysts, which would appear to be due to œdema.

In a most elaborate article on Erosions, in the *Annals of Gynæcology*, October, 1887, Dr. Cushing of New York states that these follicles and cysts may arise not from enlargement of pre-existing ducts, but be really new formed glands without ducts.

Passing on to the more clinical consideration of this disease and its causes, I think we must lay down as the fundamental proposition that the essential cause is inflammation or catarrh. It may be simply caught by a chill, and passing on to a chronic stage; it may be the concomitant of an attack of metropéritonitis, and in itself insignificant at the time in presence of the more dire disease. Its relation to scrofula, and to the infectious disorders as measles and others would, I believe, be worthy of careful observation. Its initiation during the act of parturition in a lacerated cervix, or in some more recondite nutritive disorder associated with the arrest of the normal involution of the uterus, is also a certainty.

But the point of this paper is to emphasize the importance of a careful examination of the fundus before adopting any method of dealing with cystic disease of the cervix. I have found no reference to this in books, and yet, as in the cases given, most successful dealing with the cervix may fail in curing the patient, by leaving these adenoid vegetations in the uterus. Some time ago I held the opinion that eversion and ectopian never occurred without the existence of a laceration, but it must be admitted that some degree of ectopian may be



found in virgins due to that form of glandular hypertrophy, which consists chiefly of proliferation of the cells of the rete malpighi, and that inside the uterus simultaneously may be found a tag or small mucous polyp. The two circumstances, combined with a patulous os, stimulate abortion to a dangerous degree. But I question very much if a real cystic condition of the cervix is found in non-parous women, and I hold as strongly as I wrote three years ago, that Emmett's discovery of the essential difference between a wound in the cervix and an ulcerated condition is one of the clearest rays of light we have in this class of uterine disease. My own experience is that 90 per cent. of the cases of cystic disease of the cervix are found in conjunction with laceration and ectopian. I know for an absolute certainty that cystic degeneration takes place in cervices that have been cauterised on the surface, or punctured by the actual cautery. No doubt the hypertrophy can thus be subdued, but the tear is not repaired. The specimen on which Dr. Dalton reports was taken from a patient in whom, three years previously, I had ignipunctured a lacerated cervix with temporary good results. Now the eversion and so-called hypertrophy were worse than ever, being also associated with cystic degeneration. Whether therefore this cystic degeneration be disseminated in both lips, or, as is fairly frequent, be localised on one constituting a strawberry-like polypus, I advise that the surfaces be drawn together, in order that healing by first intention be secured. Under some circumstances, amputation of the whole may be thought preferable, or a cystic polypus may be removed by an ecraseur, but these I consider details of method. The central truth is, these adenoid changes are inflammatory in nature. The next is, What is the active cause or continued irritant? And in spite of all that has been written in Germany, I maintain that the fact that the cervix is torn constitutes this irritant in many cases. Scientific surgery does not burn and torture a wound, which, by the arrangement of its surrounding structures, has a tendency to separation of the flaps, but kindly puts a stitch in. But few words are needed in reference to the treatment of

the adenoid endometric growths. The lubrics concerning careful observation and correction of any flexion, or of any existing disease of the broad ligaments and appendages can only be mentioned. The curette need not be larger than a No. 8 sound, and its edge ought to be dull. Every practical man knows how when tents, either sponge or tangle are used, they bruise and bring away fragments of tissue, and that oftentimes mere tenting has cured menorrhagia. I am in the habit of using very extensively a strip of lint about half-an-inch wide and of sufficient length, soaked in equal parts of liniment iodi and glycerine immediately after curetting. Pure carbolic acid, or iodized phenol are as a rule efficient and safe. But in very chronic cases (and we are all familiar with the tendency to recurrence of these endometric products) nitric acid, or a dull red-hot wire are requisite.

The consideration of the relevant and important relation of these adenoid changes in the cervix and endometrium to cancer must be left to another occasion.

Dr. HEYWOOD SMITH said there was no doubt that this condition existed almost exclusively in multiparous women. He thought Dr. R. T. Smith had taken the new name of cystic disease of the cervix for the condition which was generally known as follicular cervicitis. The intra-uterine growths and follicular disease of the cervix did not necessarily go together, but they were often co-existent. He said that the latter depended on parturition, which produced a tendency to proliferation of the cervical connective tissue. Hypertrophies of the inter-utricular tissue of the lining of the uterus, or even occasionally small fragments of the secretion at the placental site left behind formed the starting point of the intra-uterine growths. Fissure of the cervix thus produced first of all cervicitis, but they often got the same condition of the cervix without fissure, and often fissure without follicular cervicitis. He thought one saw cases where there had been no fissure, more than would happen in ordinary labour cases, and yet the cervix underwent enormous hypertrophy. He could quite endorse what had been said as to the very great

value of Emmett's operation. He was sure that in properly selected cases it was the only successful method of treating the malady. With regard to the pain he quite agreed as to the pathognomic indication of sacral pain as referring to the cervix, not necessarily to cervicitis, but to other conditions in which the cervix was involved.

Dr. EDIS said he had met with a large number of these cases, and after having tried all the various expedients, from nitric acid to iodised phenol, he had found that where there was hypertrophy with ulceration the surest plan was either to amputate the cervix, obtaining adhesion as far as possible by first intention, or else to perform a modification of Emmett's operation, leaving a modified stump which answered all the purposes of a cervix. Sometimes they were very intractable cases, and soon returned as bad as ever unless a radical operation were performed.

The Society then adjourned.

*THE BRITISH GYNÆCOLOGICAL SOCIETY.*

WEDNESDAY, MAY 23, 1888.

PRESENT :—28 Fellows, 8 Visitors.

The following were elected Fellows of the Society :—Dr. H. W. Powell, Dr. E. H. Crisp.

Books were presented to the Society by Professor W. Japp Sinclair, Manchester.

*A Case of Complete Chronic Inversion of the Uterus.* By FANCOURT BARNES, M.D., M.R.C.P., Physician to the Chelsea Hospital for Women.

MRS. D., aged 41, married, was admitted into the Chelsea Hospital for Women under my care on May 10th, 1887. She had chronic complete inversion of the uterus. She was the mother of ten children. Her last labour occurred four months before. Her labour had been a natural one, the pains being less than usual. There was, however, considerable hæmorrhage, and it was discovered that during defæcation, three days after her labour, the uterus projected to the size of a child's head. She was able to go about her house work, but suffered much pain above and to the left of the pubes on going up and down stairs. Since her confinement she has had hæmorrhage almost continuously. Dyspareunia and hæmorrhage followed an attempted coitus six weeks before her admission. On examination the uterus was found to be completely inverted. The sound could not be passed beyond the tumour into the cervix. Bimanual examination through the rectum and abdominal wall displayed the absence of the uterus from its normal position. Dr. Aveling's sigmoid repositior was applied to the fundus of the uterus, and pressure secured upon it by elastic bands and tapes fastened to a belt



round the waist. This was done on May 12th. In eight hours after the application of the repositor the uterus was found to be returned, so presumably it occupied even less time than that. On May 14th, at ten o'clock in the morning, I found the cup of the repositor within the cavity of the uterus and the stem firmly nipped by the cervix. By tilting down the cup and at the same time pushing up with the finger the portion of cervix opposite to it, it was released from the uterus. On May 19th the uterus felt normal to the touch and the sound passed in four inches. The patient had little or no pain from the beginning to the end of her treatment. She left the hospital quite well on the 28th May, seventeen days after her admission. On June 7th the patient came to show herself to me. I then found that the uterus was in normal position and that the sound passed upwards and forwards to a distance of two and a-half inches.

In a lecture given by Dr. Aveling in 1886, at the Chelsea Hospital for Women, he has collected eleven cases treated by different operators with his sigmoid repositor. The following table gives the names of the several operators, together with the time required for the reduction of the uterus.

Case I.	Operator	Aveling	Hours	54½
" II.	"	Williams	"	33
" III.	"	Gervis	"	51¾
" IV.	"	Aveling	"	52½
" V.	"	Rogers	"	40
" VI.	"	Edis	"	48
" VII.	"	Bantock	"	31
" VIII.	"	W. Duncan	"	48
" IX.	"	Galabin	"	53
" X.	"	Aveling	"	9
" XI.	"	Davies	"	14 (?)

He says "this table demonstrates that, on an average, each case took about 40 hours for its cure, the longest time occupied being 54½ hours, and the shortest 9 hours." In the case which I have just described, the replacement of the uterus was accomplished in 8 hours.

Now, cases of complete chronic inversion of the uterus are of sufficient rarity to justify the record of each one that occurs, whatever the treatment may be. In the case of the treatment by Barnes' or Aveling's repositors and elastic bands the recorded cases are very few. It is therefore necessary to accumulate them in order to show conclusively the actual value of this method. In any case a fair and patient trial should be given to the method by elastic pressure before cutting the Gordian knot by operation.

Dr. EDIS pointed out that, interesting as was the paper, the circumstances were very favourable for reduction, seeing that only four months had elapsed. With the same repositor he had reduced one of eight years' standing. He said the compensatory curve was of great advantage. He thought that in his case re-inversion would have occurred much more rapidly had the nurse in attendance not loosened one of the bands, and rendered nugatory the pressure. He recalled one which had been published in the *British Medical Journal* in which he had reduced one of five years' standing within thirty-six hours. Although these cases were rare, they were not as rare as one would imagine from the recorded cases. There were a number of cases of partial inversion where the condition was not recognised, simply because the prolapse did not protrude through the os uteri. In such cases the fact that the sound would not enter more than one and a half inches ought to put the medical man on his guard. Generally speaking he thought it was possible to reduce most cases of inversion within twenty-four hours, but it was generally considered that gradual pressure was the best. He referred to the case reported by a medical man from Birmingham, who, having tried the effect of the spring used against the chest, opened the abdomen and even made a hole into the uterus, without effecting a reduction. He mentioned that one difficulty with the repositor was that the cup followed the fundus back into the uterus, and was not easy to withdraw without reproducing the malposition. In the first case he was unable to withdraw the repositor without some little trouble.

Dr. ROUTH suggested using a sea tangle or sponge tent, and when the os was thoroughly dilated the apparatus could easily be removed, especially if chloroform was used. He said there was no reason why the metal part of the instrument should not be very much thicker, and its size might be made capable of being diminished by a screw on one side.

Dr. BANTOCK congratulated Dr. Fancourt Barnes on the short time it had taken him to effect the reduction of the uterus in the case he had brought before the Society. With regard to his own case, to which Dr. F. Barnes had referred by quoting the time occupied in the reduction, he thought several hours might fairly be taken off the time stated, for it was quite evident that the uterus had gone back several hours before the instrument was withdrawn, and the time was clearly marked by the occurrence of a sharp, sudden pain. A great deal had been said about the difficulty of removing the instrument after it had gone up into the uterine cavity along with the retreating fundus. There was no difficulty about it, for the instrument only required tilting to one side to effect its speedy extraction even after the external os had closed around the cup, and he did not see the necessity for such an arrangement as suggested by Dr. Fenwick. In his opinion it would only tend to make the accurate adaptation of the instrument more difficult. There was one practical point to which he would call attention, and that was the strength of the elastic bands supplied with the instrument. In his own case the bands first supplied were so weak as to be quite useless, and the result was the loss of valuable time. After stouter bands were put on the reduction was effected in a few hours. With regard to the size of the cup he was under the impression that two or three different sizes were supplied with the instrument, and he, for one, was quite satisfied with its present form.

At a later period Dr. Bantock pointed out that there was much exaggeration as to the extent to which the instrument passed into the uterine cavity; one might imagine from some of the observations and suggestions made that as the fundus retreated the instrument followed it until five or six inches of

the instrument had disappeared. Now in Dr. Barnes' case we were told that the uterus measured only four inches after reduction, but it was obvious that the cup could not have passed more than an inch or two at most, and his belief was that it did not go much, if any, beyond the internal os.

Dr. HEYWOOD SMITH said that such a discussion could not fail to be of very great use. He criticised one expression, viz., that the use of physical force in attempting this reduction would be attended with danger. He said that surely the instrument described was a form of physical force. Moreover, he always preferred in all cases, if possible, to use the hand first and then use instruments later on, if necessary. At a case in the hospital for women, of three months' standing, he succeeded in reducing the inversion in fifty minutes. He said that if the inversion had existed for a long time the cervix often gripped the body of the uterus. With respect to the reposition of chronic inversion by the hand, he said there was no doubt that the construction of the cervical band was the chief difficulty, and the first thing to be done was to get the hand well into the vagina and keep up a steady squeezing. Presently the uterus, instead of being a hard ball, became more or less flaccid. Inasmuch as the place of insertion of the oviduct was a thinner portion than elsewhere, it had occurred to him to commence reposition by pushing with the finger or thumb at the insertion of one or other of the oviducts. As he pressed up the side of the uterus it gradually recovered its proper shape. From his experience, on this occasion, he was quite sure that the best way was to commence by the hand, and preferably at the insertion of the oviduct.

Dr. EDIS said that he omitted to mention one point, and that was as to the necessity of having the instrument like the one before him. He had it made in a cone so that it could not well be gripped. It must be borne in mind that they were working through the passage of the vagina, and consequently that it was not easy to tilt the instrument. In the case he alluded to the cup had penetrated three inches or so into the uterus and adhered like the suckers boys use.



Dr. FANCOURT BARNES said it was the fact of its being the only case in which he had reduced a chronic inversion in eight hours that had induced him to bring it forward. It was not by any means the only case he had seen. He said that the method of reducing inversion of the uterus by elastic pressure was due to Dr. Tyler Smith. As to the time, Dr. Edis' case was of eight years' and his own of four months' standing, but as in his own case the process of involution was complete at the end of two months, he did not see that it made any difference. Dr. Fenwick's suggestion as to applying an india-rubber bladder around the stump was a good one if Dr. Aveling's instrument was to be employed, but in his father's instrument the stump was broader and might with advantage be made even more so. In this way it would serve as a guide to the cup and enable it to be withdrawn. He could not understand how anyone who had any experience of these cases could find it necessary to dilate the *os uteri* with tents in order to get the cup out. He had withdrawn it without difficulty. He had only found it necessary to hold one side of the *os* fixed so as to tilt the cup down. The perinæal curve in Aveling's repositor was not really necessary and might be dispensed with. He had not attempted to reduce the inversion with the hand because he was convinced that the instrumental method was preferable.

*The Treatment of Hæmorrhage in Uterine Fibro-myomata by Hydrastis Canadensis.* By HENRY T. RUTHERFOORD, B.A., M.B., Camb., M.R.C.P., Lond.


AS the treatment of uterine fibro-myomata is arousing considerable interest and discussion, owing to Apostoli's method of treatment by electrolysis, the following five cases may be of interest. They were all out-patients under me at the Chelsea Hospital for Women, and were treated in almost exactly the same way. Their cases have not been selected, but taken as they were found amongst my out-patient notes.

No restriction was placed upon them as to exercise or general mode of life, but upon their diet I made several restrictions, as suggested by Mr. Knowsley Thornton in a paper published in the *Lancet* some time back. From that paper I learned much that has since proved extremely useful to me in the treatment of these cases.

The short notes of the following cases prove, I believe, the value of hydrastis as a hæmostatic in the treatment of hæmorrhage due to uterine fibro-myomata.

*Case. 1.*—R. B., 38 years old ; married, but has no children. Complains that for the last five months she has noticed a swelling in the stomach, which is slowly but gradually increasing. Her periods are irregular as to date and generally last one week or longer, the quantity being profuse and greater than formerly. She has dragging pains in the abdomen, and micturition is frequent. On examination the cervix was very high, almost out of reach of the examining finger. Bimanually an irregular, hard, nodulated tumour was found occupying the left iliac fossa, reaching almost to the umbilicus and passing to the right of the median line. The fundus uteri could not be distinguished. The tumour and cervix moved as one mass, and there was no doubt we had to deal with a large fibroid tumour. On April 2nd, 1886, she was ordered a mixture of Pot : Brom : gr. x. and Ext : Ergot : Lig : ℥ 30, three times a day.

On April 16th this mixture was altered to one with Tinct : Hydrastis ℥ xv., three times a day, when great improvement set in ; and after continuing this treatment for some time the patient discontinued coming to the hospital as she considered herself well.

 *Case 2.*—Mrs. M., 46 years of age, married. Has had no children, but two miscarriages. She came to me complaining of a swelling in the left side of the abdomen, which had gradually been increasing for the last ten years. Her periods have always been profuse, lasting sometimes for three weeks. On examination the anterior lip of the cervix was hard and greatly enlarged. Occupying the left side of the abdomen

was a hard, irregular, fibroid tumour, reaching as high as the umbilicus and extending outwards to the flank. Uterine sound passed five inches upwards and to the left. On April 2nd, 1886, the patient was ordered Tinct: Hydrastis ℥ xx., three times a day, with an aloes and iron pill to be taken every night.

She continued to improve on the Hydrastis, and on June 18th, 1886, when I last saw her, my notes of the case say an improvement has taken place in the condition of the patient, "the catamenia came on regularly; duration five days; quantity moderate." At this visit Lig: Strychniæ ℥ v., and Calumba were added to the Hydrastis. There were none of the usual symptoms of the menopause in this case unless we include the menorrhagia, but this has continued profuse for many years, so that I think we may safely omit the menopause as a cause of the flooding. It is well known that the menopause is frequently postponed, sometimes for years, in cases of uterine fibroids, and such, I believe, is the case here.

*Case 3.*—S. B., 47 years of age; has had three children and several miscarriages. She saw me for the first time on April 15th, 1887, and then complained of pain and swelling in the left side of the abdomen. The swelling she first noticed some months previously. Her periods have always been regular but very profuse, lasting sometimes 14 days. Complains also of flooding during the last three months. During March she had three severe attacks of hæmorrhage. On examination it was found there was still present a copious sanguineous discharge. The whole uterus was enlarged. Uterine sound passed four inches in a forward direction. Two inches above the fundus uteri and on the left was a hard rounded tumour—fibroid—which bimanually could be felt to pass into the pelvis. Uterus and tumour move as one.

On April 15th, 1887, she was ordered a mixture containing Tinct: Hydrastis ℥ xx. in one ounce of Inf: Quassi; to be taken three times a day. This mixture was continued regularly for a fortnight, when the patient's condition was greatly improved, the hæmorrhage now amounting to a slight

sanguineous discharge. Early in June the flooding had ceased, and on June 24th my notes say, "Flooding entirely ceased." On January 20th, 1888, patient still continued free from floodings; periods are regular; not as profuse as formerly; duration also shorter.

It may be said that the floodings in this case were due to the climacteric period, but I questioned her very closely to ascertain if any of the usual symptoms of the menopause were present, and could find none. Even at this date, January 20th, 1888, no symptoms have occurred, the floodings have ceased and the catamenial periods are quite regular.

*Case 4.*—S. S., 51 years of age; married, has four children. Consulted me on April 15th, 1887, for "bleeding from the womb, which has continued off and on since Christmas, 1886." Has always been regular every month, the flow being profuse and lasting generally a week. Until Christmas, 1886, had never suffered from metrorrhagia. On examination a hard irregular fibroid tumour was found occupying the anterior and left lateral wall of the uterus. The sound passed for a distance of  $3\frac{1}{2}$  inches into the uterine cavity. The new growth rose 1 inch above the fundus uteri on the left side. The patient was ordered Pot : Brom : gr. x., and Ext : Ergot : Lig :  $\text{m xxx.}$ , in a mixture three times a day. On April 29th, a fortnight after her first visit, the "hæmorrhage was still excessive." On May 20th, as the flooding still continued, a mixture of Pot : Brom : gr. x. and Tinct : Hydrastis  $\text{m xx.}$  was ordered, with the result that the hæmorrhage ceased.

On July 1st, my notes say, "slight pinkish discharge at times only."

The mixture was continued with the best results, for on October 14th, 1887, I find that "the last catamenial period came on October 9th; lasted five days; was not profuse." Is regular every month.

On November 11th, when I saw her for the last time, she stated that she was regular every month, but never flooded now. Says she feels very well.

Owing to the age of this patient and the flooding coming



on rather suddenly, I was careful to enquire into any symptoms of malignant disease, but am perfectly satisfied we were dealing with a simple fibroid tumour.

*Case 5.*—E. C., aged 36 years, married; has had seven children; complains of flooding, which first begun with each menstrual period, but now occurs between the catamenia. For some considerable time she has noticed a lump in the right side of the abdomen which causes a continual dragging pain in the pelvis. For the past six weeks she has been losing blood almost continually, sometimes in considerable quantities.

On examination the uterus was enlarged and rose above the pubes. The whole organ was hard and bulky. On the right and in front of the uterus was a fibroid tumour the size of a cocoa-nut, occupying chiefly the right iliac fossa.

On September 2nd, 1887, patient was ordered a mixture containing 15 grs. Pot: Brom: and 30 min: Ext: Ergot: Lig: with a pill of Cascara Sagrada to regulate the bowels. The metrorrhagia was lessened but not stopped. On September 30th, as the ergot did not seem to lessen the hæmorrhage satisfactorily, the patient was ordered a mixture containing bismuth and Tinct: Hydrastis ℥ xxv., to be taken three times a day. The floodings after this ceased, and on December 30th my notes of the case say "Floodings have ceased for a considerable period. Patient considers herself well."

It is interesting in this case to note how Hydrastis Canadensis effectually stopped the floodings, when ergot and bromide of potassium failed. I have notes of another case similar to this, in which the floodings were severe and had greatly weakened the patient. Ergot and bromide had been tried without success, and oöphorectomy been advised by a provincial medical man. Before submitting to the operation she consulted me as to advisability of the operation. Hydrastis was tried, and I am happy to say with the best results.

*Remarks.*—Hydrastis Canadensis may be used in different forms; as the tincture which I have invariably used, in doses of ℥ xv. to ʒj; as the fluid extract, in doses of ℥ xv. to ʒ ss.; or as the alkaloid hydrastine or hydrastina, which must not be

mistaken for the eclectic preparation hydrastin, which is composed chiefly of herberine. The two first mentioned preparations are those most generally employed, some authorities preferring the fluid extract, while others assert that the tincture is the most certain in its action. Of the fluid extract I have no personal experience, as I first prescribed the tincture and have had no occasion to be dissatisfied with its action. If hydrastin be preferred it may be ordered in pill form, each pill containing two or three grains of the drug.

As regards its action on the human body, if we may judge from experiments made on rabbits, it would seem to be a vaso-constrictor in ordinary medicinal doses, while in large or toxic doses it is a vaso-dilator. Uterine hæmorrhages are checked by the persistent anæmia produced in the uterus due to contraction, and according to Wilcox (*New York Medical Journal*) this contraction is "unaccompanied by the distressing cramps of ergot or the flooding from the alternate contractions and relaxations." The patients whose cases are reported above were all of them entirely free from any pain, such as is sometimes experienced when ergot is given in large quantities.

Woltering (*All. Med. Cent. Zeit.*, No. 46, 1886) confirms the favourable results obtained with this drug by Fellner and others, and mentions cases in which the uterus measured, in one case eight centimetres, in another nine centimetres, and hæmorrhage was an alarming symptom. The hæmorrhages soon ceased and the condition of the patient was greatly improved. Pallin has used this drug not only in uterine fibromyomata, but in other conditions in which hæmorrhages have been the chief symptom, as endometritis and menorrhagia in young girls. He considers it a very useful and efficacious remedy, but his results in five cases of fibroid tumours are not altogether conclusive, as other drugs were ordered with the fluid extract. Schatz (*Berl. Klin. Wochen.*) denies its action on the muscular fibres of the uterus, but gives as one of the indications for the use of the drug, hæmorrhages due to sub-mucous fibro-myomata. That it acts favourably in many cases

of uterine hæmorrhage is undoubted, and I believe in many cases of uterine fibroids its use will be found more advantageous than the usual treatment by ergot, especially in those cases in which ergot causes obstinate constipation or derangement of the digestive tract. The tincture of hydrastis can be taken continuously for a considerable period without any ill effects ; indeed, it will be found to improve digestion and act as a stomachic tonic. I do not wish to assert that its action as a uterine contractor is as powerful as that of ergot, but I feel sure that it may be advantageously employed in some few cases which have not yielded to ergot, and in many cases in which ergot is objectionable for the reasons already assigned.

Electrolysis undoubtedly causes a reduction in size of fibroids, and in some cases an actual disappearance ; ergot pushed in considerable doses will frequently bring about a sensible diminution in the size of fibroids, but there are cases in which ergot seems to have no controlling action whatever, either upon the hæmorrhage or upon the increase in the size of the tumour. In the above cases, while hæmorrhage was controlled by the use of hydrastis, its effect upon the size of the tumours were nil, at least so far as I could judge, and in each case I was careful to note this point as accurately as possible. They certainly did not increase in size, but I am bound to admit they did not decrease. It has been claimed for hydrastis, however, that in many cases if the drug is pushed sufficiently, a diminution in size will take place ; and cases are recorded in which the fibroid, as judged by the length of the uterine cavity, diminished to the extent of two or three centimetres. So far as I can find this lessening in size of the uterine tumour seems rather the exception than the rule, and judging from cases under my care I would say that while hæmorrhage is checked by the use of hydrastis, no decrease in the size of the tumour takes place.

Many patients with uterine fibroids come to us complaining of the excessive hæmorrhage which is slowly but surely draining their system ; the size of the tumour seems to cause them no inconvenience, as in Case 2, where the tumour had

been noticed for ten years, and were it not for the menorrhagia and metrorrhagia we might, perhaps, never see them ; many patients, again, will not submit to the treatment by electrolysis, as the process occupies too much of their time, or the ultimate result of this method of treatment does not appear to them to compensate in a sufficient way the time they will have to devote to it ; in some few, again, ergot seems to have no effect in checking the hæmorrhage, as was the case in Mrs. E. C., Case 3 ; or it may cause great disturbance of the digestive tract. Where these conditions exist I believe hydrastis, either as the tincture or fluid extract—the two most reliable preparations—will be found of value, and deserves a fuller and more extended trial than has hitherto been given it in this country.

In conclusion, I would add that the drug has been extensively employed in uterine hæmorrhages due to causes other than fibro-myomata. In Russia, Germany, France and America the drug has been largely and successfully used in fungous endometritis with copious hæmorrhage ; in climacteric hæmorrhage ; in hæmorrhage in young girls ; in metritis with menorrhagia, and in other hæmorrhagic conditions, with the result that it can be safely recommended ; but as my experience in the use of it in such cases is limited, I have ventured to omit them, and merely bring before your notice the five cases recorded above and their treatment by *Hydrastis Canadensis*.

Dr. PARSONS mentioned a case of fibroid. When the patient came to the out-patient department she was almost sinking from hæmorrhage, and was at once admitted. It was doubtful whether she would have been able to stand the electrical current, and he therefore gave her *hydrastis canadensis*, with the most extraordinary effect. Previously to its administration she was losing profusely. He gave her 3 gr. every four hours. At the end of two days the hæmorrhage began to decrease, and in five or six days she was comparatively free. On diminishing the dose the hæmorrhage returned. The question arose as to whether the result was merely temporary or whether the drug had some effect on the growth of the tumour.



Comparing the action of electricity and hydrastis he said the effect of electricity was permanent, but as to hydrastis they had to wait for further information. He remarked that, three of Dr. Rutherford's cases were near their climacteric.

Dr. EDIS said that the drug was one which would commend itself to the ordinary practitioner. It was largely used in America. He had been very satisfied with it in a number of cases. He observed that in the case in question the *hydrastis* undoubtedly had an effect in checking the hæmorrhage. Although electrolysis was vaunted as THE remedy at present, it would be ultimately found to be only one of the remedies at their command. Patients came to have the hæmorrhage checked, and were satisfied if that was done: They could always have recourse to electrolysis if that failed.

Dr. RUTHERFOORD, in reply, said that the three cases of patients near their climacteric did not affect his paper, because he did not bring forward *hydrastis* as a cure for fibroids but merely as a remedy for hæmorrhage. He did not think the drug acted on the tumour or on the muscular structure at all. It seemed to act through the nervous system, causing a contraction of the blood vessels. With regard to electrolysis, he was prepared to admit that it was more powerful, but some patients absolutely refused to submit to it.

The Society then adjourned.

## REVIEWS.

*A Practical Text-book of the Diseases of Women.* By ARTHUR H. N. LEWERS, M.D.Lond., M.R.C.P.Lond., Assistant Obstetric Physician to the London Hospital; Examiner in Midwifery and Diseases of Women to the Society of Apothecaries of London, &c.; pp. 400. H. K. Lewis, London.

This text-book is a handy compilation intended especially for the student, into whose hands it is sure to find its way. Though possessing no great pretensions, the work has the advantage of being thoroughly practical, an advantage not always found in larger text-books. The treatment of early malignant disease of the cervix is adequately dealt with, the method of operating fully described, and the history and treatment of several cases detailed. Upon the treatment of fibroid tumours of the uterus by electricity the author declines to express an opinion. He has treated several according to Apostoli's method, but regards the subject as yet hardly ripe for a positive decision. Numerous illustrations, borrowed chiefly from Simpson, Schröder, and Doran, add to the value of the volume. To the student we heartily commend this little book as handy in size and sound in material.

*Cancer of the Uterus; being the Harveian Lectures for 1886.* By JOHN WILLIAMS, M.D., F.R.C.P., Professor of Midwifery in University College; Obstetric Physician to the Hospital; Physician Accoucheur to Her Royal Highness Princess Beatrice, &c.; pp. 119, with plates. H. K. Lewis, London, 1888.

In this volume are comprised the Harveian Lectures delivered at the Royal College of Physicians of London in

1886. The subject is dealt with under three heads: Cancer of the portio vaginalis; cancer of the cervix; and cancer of the body. In dealing with cancer of each of these parts of the uterus the author cites numerous cases, and describes their microscopical appearances. In many points his teaching is at variance with several recognised authorities, but in support of his arguments cases are adduced which seem to prove his contention.

Numerous plates illustrating the various phases of uterine cancer are supplied at the end of the volume.

*Anæsthetics: their Uses and Administration.* By DUDLEY WILMOT BUXTON, M.D., B.S., Administrator of Anæsthetics at University College Hospital, Hospital for Women, Soho Square, and the Dental Hospital of London. H. K. Lewis, London, 1888.

This forms a very complete and practical exposition of the subject, and should prove a valuable text-book, especially to those who are occasionally called upon to give anæsthetics, but whose experience cannot be large. It opens with an interesting historical sketch of the rise and development of the various anæsthetic agents now in vogue, and then passes on to the question of the choice of anæsthetics in particular cases. The importance of the question is not at all exaggerated, and it would be well if more discretion were used in this matter generally, seeing that there is too great a habit of giving some routine anæsthetic, irrespective of the special characteristics of the case in hand. And while speaking generally of anæsthetics, it would have been interesting, especially after Sir Spencer Wells' strong advocacy of methylene in abdominal surgery, if Dr. Buxton had expressed his own opinion on this "mixture" a little more fully. In one place he recommends it (as well as chloroform and A. C. E. mixture) for this class of case, where "tranquillity of respiration is desired," but he goes on to say:—"For all prolonged and exhausting opera-

tions, ether should be given, unless contra-indicated." Now abdominal sections are very often prolonged, and are certainly exhausting operations, so that, though he agrees that methylene is more agreeable, and its after effects less severe, yet he would apparently prefer ether, perhaps because the dangers of methylene are similar to those of chloroform, though, according to its advocates, in a less degree.

With reference to heart disease, Dr. Buxton says:—"Valvular disease of the heart, except where incompetency at the aortic orifice occurs, does not *per se* greatly affect the prognosis about the safety or danger of giving an anæsthetic." And he proceeds to show that in autopsies made after death from an anæsthetic, there has been structural change in the muscle, rather than valvular disease. Unfortunately, this condition cannot be always diagnosed unless there is much accompanying dilatation—when it may be suspected.

The various anæsthetics are described *seriatim*—their physiological action, methods of administration, dangers, and their treatment. This necessitates, occasionally, some repetition, but that is not altogether undesirable, seeing that it emphasises important points.

The descriptions of Clover's apparatus, both large and small, are not very fortunate, and the wood-cut of the larger one does not assist to make the account of it clearer. There is also no mention in connection with this, of the modification of Clover's apparatus, used by many, where the tube connected with the gas-bottle is attached by its other end to a tap at the neck of the bag of a *small* Clover.

Speaking generally, Dr. Buxton prefers the combination of gas and ether for surgical anæsthesia, and therein most will agree with him. The patient is anæsthetised rapidly, and the condition of narcosis can be maintained for a considerable time with a minimum of risk. The dangers and complications, together with the means of meeting them, are carefully treated, and form an important element in this book, which concludes with a short chapter on the medico-legal aspects of the subject. The question of administration of anæsthetics



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during sleep, charges against the administrator, death under an anæsthetic, &c., are clearly and concisely put before the reader, and form a fitting conclusion to a very useful volume.

*SUMMARY OF GYNÆCOLOGY, INCLUDING  
OBSTETRICS.*

PROVINCIAL MEDICAL JOURNAL.

*Dysmenorrhœa.* By AMAND ROUTH, M.D.

In this interesting article the author discusses the causes and treatment of dysmenorrhœa. The local causes of this disorder are grouped under the following heads: (1) *Spasmodic*, which may, however, be quite independent of any local disease, and is in some cases a neurosis. (2) *Obstructive dysmenorrhœa*, either due to organic stenosis of any part of the genital canal or to displacements, to fibroids or altered uterine contents. (3) *Inflammatory dysmenorrhœa*, caused by inflammation of the uterus, ovaries, tubes, or peri-uterine tissues. (4) *Congestive dysmenorrhœa*, either primary or secondary.

The constitutional causes are shortly mentioned, as anæmia, chlorosis, diabetes, phthisis. The specific fevers, especially typhoid and scarlatina, are prone to produce a cirrhotic condition of the ovaries, while rheumatism affects the fibrous tissue so abundant in the ovary. In the treatment of dysmenorrhœa, stress is laid upon the evil effects produced by opium, if administered too frequently or in the less severe forms. The use of chloral and alcohol may lead to their abuse unless great care be exercised. For spasmodic dysmenorrhœa, and for dysmenorrhœa due to fibroids, nitroglycerine and amyl nitrite are advocated. The bromides in ovarian, cannabis indica in place of opiates in cases of obstructive dysmenorrhœa; guaiacum or salicylate of soda in cases of rheumatic origin and antipyrin in neuralgia cases, are amongst the remedies recommended for constitutional treatment. With regard to local treatment, the author raises a protest against the

division of the cervix or "hysterectomy," an operation which is neither efficacious nor safe. In the treatment of spasmodic dysmenorrhœa, the passage of metal bougies, up to No. 12, will generally be found sufficient and involves very little risk to the patient. In obstructive dysmenorrhœa, similar treatment, carried further and with greater precautions, will generally effect the desired cure. Intra-uterine, stem pessaries are occasionally necessary, but must be used with great caution and with strict antiseptic measures. They should never be employed when any inflammatory processes in the pelvis, either present or recent, are known to exist. In congestive dysmenorrhœa, rest in bed with astringent lotions and hot douches will generally be sufficient; but if the congestion is caused or increased by prolapsus vaginal pessaries must be used. Of these the author prefers the Hodge lever pessary, and avoids the ring pessary as much as possible. The use of electricity in dysmenorrhœa is not discussed, as this method of treatment is still *sub judice*.

EDINBURGH MEDICAL JOURNAL.

*Some Cases of Puerperal Septicæmia due to Impure Atmosphere.*

By C. E. UNDERHILL, M.B.

The author records four cases of puerperal septicæmia which have come under his notice within recent years. Unfortunately, notes of the cases were not taken, and as the history of each case is given from memory many interesting details are omitted.

*Case 1.*—The patient, a strong and healthy young woman, was delivered of her first child in October, 1886. Living in the same house with the patient was a relative slowly dying of malignant disease of the stomach. The labour proceeded normally until towards the end, when the membranes were retained and had to be removed by passing the hand into the uterus. This was followed by an intra-uterine douche of Condy's fluid. Next day the temperature rose to 102° and

the uterus was washed out by a sublimate solution (1-5,000). No pain was complained of, but tympanites set in with rapid pulse and high temperature. The lochia were fœtid. On the third day after delivery diarrhœa set in, and on the fifth the patient died.

The author is of opinion that in this case the atmosphere of the house was vitiated by the relative who was dying of cancer of the stomach. Discharges from cancer of the uterus are known to be highly dangerous to lying-in women, but it did not occur to the author that cancer of the stomach would be a source of infection.

*Case 2.*—Mrs. B., who was delivered of a child seven months previously, received into her house a relative suffering from a suppurating cyst of the bladder. Two months after Mrs. B.'s relative entered the house, and while the suppurating cyst was still discharging, Mrs. B. became pregnant. Towards the end of the third month Mrs. B. aborted, and continued to do well until the fourth day, when she complained of pain in the abdomen and fœtid lochia. The uterus was immediately washed out with an antiseptic solution and some membranes removed. No improvement followed; on the contrary, symptoms of purulent peritonitis set in, attended by great pain but low temperature. The patient gradually sank and died eleven days after her abortion.

In this case the evidence is conclusive. No examination was made until septic symptoms showed themselves, and the shreds of membranes removed were not sufficient to cause septicæmia. On the other hand suppurating discharges were daily going on from a case of chronic pyæmia, and the air was undoubtedly full of septic germs.

*Case 3.*—A young and healthy woman was delivered of her first child in September, 1887. The labour was normal and the patient did well until the sixteenth day after delivery. She was then moved into another room, and two days after began to complain of feeling ill. Seven days after her removal into the new room the temperature had risen to 104° and continued high for some days. Twenty-eight days after delivery



the drains were examined, and a leak discovered in the pipe under the closet behind the sitting room. The patient was immediately removed to another part of the house and was soon convalescent. This case was an undoubted one of drain poisoning, as is shown by the symptoms of septicæmia occurring on the removal of the patient from her lying-in chamber to a sitting-room in close proximity to a drain from which sewer gas was escaping, and her subsequent convalescence on her being placed in purer atmosphere.

*Case 4.*—A primipara was confined in September, 1885. The labour was tedious and the perineum was torn but sutured at once and healed well. On the third day the temperature rose and the lochia became offensive. There were no distinct rigors. This condition of things lasted some ten or twelve days, when the patient was removed to another part of the house owing to the unpleasant smell from a W.C. which was in close proximity to the lying-in chamber. In this case the septicæmia was also due to sewer gas, which the author suspected, as there was no local inflammatory mischief to be detected.

THE INTERNATIONAL JOURNAL OF THE MEDICAL  
SCIENCES.

*The Improved Cæsarian Section, with the Report of a successful Case.* By H. J. GARRIGUES, M.D.

M. J., æt. 22, married; has had one abortion when two months pregnant. Last menstruation occurred on May 20th, 1887. Was admitted to the Maternity Hospital, January 31st, 1888.

The patient is of slender build, and  $55\frac{1}{2}$  inches high. Pelvic measurements: between anterior superior spines of ilium  $7\frac{1}{2}$  inches; between crests of the ilium  $8\frac{1}{2}$  inches; Bandelocque's diameter  $6\frac{1}{4}$  inches; conjugate diameter just over 3 inches. The transverse diameter of the whole pelvis was greatly narrowed. Labour pains began at 8 p.m., on February

23rd, and increased during the night. The external os allowed the introduction of the finger and a uterine tube. After strict antiseptic precautions had been taken by using corrosive sublimate solutions, a medium incision was made in the abdomen from the umbilicus to  $2\frac{1}{2}$  inches above the symphysis pubis. On opening the peritoneum this incision was carried upwards for  $4\frac{1}{2}$  inches to the left of the umbilicus. All bleeding points were clamped. Four silk sutures were inserted above the umbilicus, and the uterus then lifted out of the abdomen by pressing first the right corner, then the fundus, and finally the left corner. The body easily followed. Towels soaked in hot sublimate solution (1 in 10,000) covered the uterus. A thick india-rubber ring was placed loosely round the cervix, and the four sutures in the abdominal incision were tied. Flat sponges were placed in front and behind the uterus. The uterus was opened in the middle line at the most prominent point, and the rubber tube round the cervix was tightened by an assistant. The uterine incision was enlarged sufficiently to allow the operator's hand to pass into the uterus. The membranes were torn near the lower end of the incision, the left hand passed in, and the occiput of the child's head grasped and lifted out. The body followed easily. The placenta, which was loose, was carefully removed after the membranes had been slowly separated from the uterus. The uterine incision was closed by six deep silk sutures, entering about three-eighths of an inch from the edge on the outer surface, and including all the tissues except the peritoneum and endometrium. The uterine cavity was not cleansed in any way. "Inclosing the deep sutures, the peritoneum was folded in between the edges by means of a tenaculum. Next, eight superficial fine silk sutures were inserted through the peritoneum alone, between and at the ends of the deep sutures, going in and out on the same side before crossing the line of incision, so as to obtain a broad opposition." The elastic ring surrounding the cervix was next slowly loosened, and any bleeding controlled by forceps. This part of the operation lasted twenty minutes. The peri-

toneal toilet was next carefully carried out, but did not occupy much time, as no blood or liquor amnii had escaped into the cavity. The abdominal wound was finally closed by five silk sutures, making, with those inserted at the upper end of the wound earlier in the operation, a total of nine. The operation lasted one hour and eighteen minutes. The measurements of the foetal head were: occipito-frontal  $4\frac{3}{4}$  inches, sub-occipito-brigmatic  $3\frac{3}{4}$  inches; bi-parietal  $3\frac{3}{4}$  inches; occipito-mental  $5\frac{1}{4}$  inches. On March 2nd the abdominal dressing was changed, and the wound was united. On March 8th, the temperature, which had hitherto been normal, rose to 103.6, and the patient complained of sore nipple and a hard lump in the right breast. The abdominal dressing was renewed at this date. The fundus uteri stood four inches above the pubis; there was no tenderness either on abdominal palpation or by vaginal examination. The lochia were coloured pink and perfectly sweet. Five weeks after the operation both mother and son were perfectly well.

*Hysterorrhaphy.* By H. A. KELLY, M.D.

The essential feature of this operation consists in "the suspension or attachment of the misplaced uterus by means of sutures through the cornua or broad ligaments, in such a manner as to hold the fundus uteri permanently in ante-position." Several successful cases by Sanger of Leipsic and other operators are included in this paper. The indications for this operation are: (1) cases of adherent retroflexed uterus, in which the patient's sufferings arise from the malposition; (2) where ordinary treatment by vagina has failed; (3) to insure the permanent replacement of a malposed uterus, coincidently with any other abdominal operation; (4) in cases of prolapsus which cannot be cured by operation or treatment per vaginam. The mortality is nil per cent., and the operation has been uniformly successful as regards the subsequent results.

THE BIRMINGHAM MEDICAL REVIEW.

*On Perineorrhaphy.* By VILHELM HEIBERG, M.D.

This article, by Dr. Heiberg, of Copenhagen, deals more especially with the method of operating introduced by Mr. Lawson Tait. After a short *résumé* of the operation, a short description of Tait's method of operating is given. The author mentions fourteen cases of lacerated perinæum that have been operated on by him after Tait's method, and the result in every case has been most satisfactory, a good, broad, firm perinæum being the result, even in cases in which the tear has passed through the sphincter. Dr. Heiberg has tied all bleeding points, though he notes that without ligaturing the vessels "as soon as the deep sutures are put in, the hæmorrhage is arrested." He also used strict antiseptic precautions in every case, carbolic or sublimate solutions being the antiseptic preferred. In conclusion, Dr. Heiberg thinks great praise is due to Tait for thus simplifying the operation, and he believes most surgeons, if they once try this method, will prefer it to any other, whether in complete or incomplete tears.

THE AMERICAN JOURNAL OF OBSTETRICS.

*Notes on Uterine Versions and Flexions.*

By M. P. JACOBI, M.D.

Out of thirty-five cases of retroflexion, three complained of no symptoms whatever; thirteen experienced no relief from wearing a pessary; fifteen were partially relieved, and four were completely cured. In the opinion of the author the symptoms in most of these cases of flexion are attributable to an endometritis, or metritis, with venous hyperæmia of the uterus. This hyperæmia, it is suggested, is due to the slowing of the arterial current, and the consequent fall in the arterial blood-pressure. This leads to an increase in the venous tension, with an accumulation and stains of blood in the uterine and peri-uterine veins. The hyperæmia will be



greater if there already exists a distension of the veins. Thus, in pregnancy, the hyperæmia is most marked, while in anæmic or chlorotic females it is least marked. Owing to the hyperæmia, the utero-ovarium nerve does not receive a sufficient supply of oxygen, and various sensory disturbances, manifested especially in the pelvic region, but not limited to that part alone, are developed.

A series of eleven curve tracings is added, to show the lessened amplitude of the uterine curve in cases of retro flexion or retroversion. It will be seen, on comparing these cases with a normal curve, that a uterus retroflexed or retroverted has a smaller curve than a uterus occupying a normal position in the pelvis.

*A Case of Congenital Absence of the Vagina, with Retention of Menstrual Fluid.* By J. S. and A. S. McMURRAY.

J. S., æt. 16, a twin, was first seen by the authors in August, 1887. At six years of age she suffered from a mild attack of scarlatina; otherwise her previous history was good. At the age of 14½ the patient experienced symptoms common to the advent of the menstrual flow, but as there was no "show" the attempt was considered abortive. From this date until August, 1887, these symptoms returned every month, with gradually increasing severity. She had been treated by several medical men, who had not examined her, but said a little medicine would soon cure her.

Examination under ether revealed the following condition of things:—The hypogastric region was prominent, and was occupied by a globular mass resembling the pregnant uterus. Pubes covered with hair, labia majora well developed, introitus vaginae absent, but represented by a shallow *cul-de-sac*. Perinæum distended. On rectal examination, a tumour, the size of a foetal head, was discovered pressing on the perinæum. The bladder was pushed upwards and forwards. Congenital absence of vagina, with retained menstrual fluid, was diagnosed, and an operation was undertaken, to form a

vagina. During the operation about forty-eight ounces of dark, ropy fluid, resembling treacle, was drained away from the cavity. After a new vagina had been made, corrosive sublimate irrigations were carried out twice daily, and a glass stem worn. Five weeks after the operation the patient was walking about, and wearing the glass plug at night only.

*The Etrological Relation of Cervical Laceration to Uterine Disease.* By B. H. WELLS, M.D.

A careful study of 400 cases has led the author to conclude that (1) deep cervical tears do not increase, but lessen somewhat the productive fertility of those in whom they have occurred. (2) Cervical tears increase the proportion of backward and downward displacements. (3) While the average depth of the uterine cavity is but slightly increased in length, the frequency of hyperplasia uteri increases in proportion to the severity of the laceration. (4) Eversions and erosions, where there is a torn cervix, occur more often conjointly than singly, each reacting to increase or induce the other; both their frequency and importance increase rapidly in proportion to the depth of the tear. (5) Cervical laceration tends to produce disease of the uterus and predisposes to the development of cancer. (6) As the result of cervical laceration chronic parametritis is apt to supervene; oöphoritis and salpingitis, though not directly, are frequently indirectly started by cervical tears; various neuroses are frequently present and only cured by an operation on the cervix.

*Treatment of Fibroid Tumours by Electricity.*

By VICTORIA SCOTT, M.D.

In this article the results of six cases of uterine fibroids treated by electricity are recorded. A short abstract of the cases will be of interest.

*Case 1.*—A single woman, 36 years of age, had for several years been troubled with menorrhagia, fulness and pain in the pelvis, difficulty in micturition. The uterus measured five inches. The diagnosis made was "interstitial and subperi-

toneal fibroid tumours." In the autumn of 1877, galvanism was applied twice weekly for forty minutes. The positive pole was placed over the pubes, the negative in Douglas' pouch. In December the patient suffered from much pain that kept her awake at night. Micturition less difficult. On January 2nd, 1878, the monthly period was less than formerly; uterus smaller. January 8th, an insulated needle was inserted into the tumour for five minutes, the negative electrode being used. January 18th, negative galvano-puncture for thirteen minutes. Not much difference in size of tumour. February 6th, the uterus was swollen and tender round seat of puncture. Menstrual period less; bearing down pelvic pains worse. March 1st, patient was better, but refused further galvano-puncture. September 1st, patient's condition improved; can now do some work. After this the patient only came occasionally for treatment. On January 24th, 1886, the author was informed that the patient had died after hysterectomy.

*Case 2.*—Patient æt. 34; first noticed an abdominal swelling and menorrhagia in June, 1879. In the following August she took medical advice. A hard tumour was found extending up to the umbilicus. "Vaginal and bimanual examination showed a hard vaginal os, and a large hard body within the uterus. The sound could not be introduced." An intra-uterine fibroid was diagnosed and the faradic battery used once a week until December, 1881, "when the uterus had returned to its normal size." Three years after she had been discharged as cured, another small fibroid tumour was found in the posterior wall of the uterus. The tumour was about the size of a walnut. Four months of "tonics, ergots, massage and faradic electricity" and daily gymnastics dispelled this second fibroid.

*Case 3.*—Patient, aged 26 years. Complained of pain in the back, bearing down in pelvis, dysmenorrhœa. No hæmorrhage. Examination showed a thickening in the posterior wall of the uterus, from which a nodule the size of a walnut protruded. Subperitoneal fibroid was diagnosed. Treatment consisted of the use of the galvanic current twice

weekly. Relief was soon experienced, and after eight months' treatment the patient was cured. The poles in this case were placed, one in the vagina (which?) and the other over the abdomen.

*Case 4.*—Mrs. E., æt. 39, sterile; complaining of severe dysmenorrhœa and menorrhagia lasting for fourteen days. A vaginal examination showed a fibroid tumour about two inches in diameter, and three smaller ones on the posterior wall of the uterus. The sound passed into the uterine cavity a distance of three inches. The treatment consisted in the administration of ergot and the galvano-puncture of the largest of the tumours; the application lasting for twenty minutes. During January, 1886, five galvanic applications were made, each sitting lasting about twenty minutes. During February and March intra-uterine applications were made twice weekly. On April 1st, three months after the first application of the electric current, the condition of the patient was much improved. The dysmenorrhœa had gone; the menstrual periods were normal as to date and duration. The tumours were greatly reduced in size.

*Case 5.*—A married woman, æt. 34, sterile. The symptoms in this case were constant hæmorrhage and pain. Had been an invalid for three years. There was a large sub-mucous fibroid, with many interstitial and sub-peritoneal growths. Treatment consisted in the use of galvanism twice a week, one pole in the vagina, the other over the abdomen. Each application lasted from fifteen to forty-five minutes. In two months the tumours had greatly diminished in size, and at the end of six months the patient discharged herself.

*Case 6.*—A married woman, æt. 25. Had one miscarriage six months after her marriage, five years ago. About January, 1885, her monthly periods increased in duration and became painful. In the posterior wall of the uterus there was a fibroid the size of a fowl's egg. The sound passed into the uterine cavity for a distance of  $3\frac{1}{2}$  inches. On January 14th, 1886, this fibroid tumour was treated by negative galvano-puncture and positive galvano-puncture for fifteen minutes.



Twelve cells of a Fleming's battery were used. On January 30th the negative current was applied round the tumour. One intra-uterine application of the negative current was made during February. On March 3rd the tumour was again punctured and the current applied for fifteen minutes. From this date until April 13th the galvanic current was applied twice weekly. After this the patient considered herself well, and no tumour could be detected. In all the cases but two besides the employment of galvanism, ergot and tonics were administered, but whether for only part or the whole of the time the patient was under observation, is not stated. The strength of the current used in each case is not stated, so that the record of the cases can hardly be considered complete.

THE BROOKLYN MEDICAL JOURNAL.

*Multilocular Dermoid Cyst. Suppuration; Operation; Death.*

By C. N. COX., M.D.

Mrs. W., æt. 27, married six years, was delivered of twins on December 6th, 1886, after a tedious labour. Immediately after labour abdominal tenderness and swelling set in, with nausea, vomiting and symptoms of peritonitis. On December 13th the lochia ceased; temperature 102°; pulse 100 per minute. There was extreme abdominal tenderness at this date, with some pelvic cellulitis. After an illness of some weeks' duration, the condition of the patient began to improve. The right side of the abdomen was now noticed to be fuller than the left; and on percussion and palpation an abdominal tumour about the size of a closed fist was detected. The tumour was baggy to the feel, but not tender. It was thought to be a fæcal mass and laxatives were employed, but without avail. On February 2nd, 1887, as the condition of the patient was serious, it was decided to aspirate the tumour. A medium-sized trocar was introduced, and a quantity of greenish offensive pus was drawn off. On withdrawing the trocar its nozzle was found to be stopped up with hairs. On February 4th abdominal section was performed, cocaine being applied

locally, while ether was dispensed with. The peritoneum was thickened and adherent, and on being opened about two quarts of pus escaped. The cyst was evacuated and removed, and the peritoneal cavity thoroughly irrigated with a sublimate solution 1 in 2,000. A drainage tube was then inserted and the wound closed. The patient died the next day. The cyst was a multilocular dermoid cyst of the right ovary. The author believes that had the cyst not been very small at the time of labour, its presence would have been discovered. He also remarks on the length of time that was allowed to elapse between the discovery of the tumour and the operation, but inclines to the belief that by delaying the operation the chances of saving the patient's life were greater.

#### OBSTETRICAL SOCIETY OF NEW YORK.

At a meeting of this Society held on January 3rd, 1888, Dr. Harrison narrated a case of extra-uterine gestation which had been cured by galvanism. The pregnancy was tubal, and had advanced to about the third month. Everything could be made out by the bimanual method of examination, and he had excluded every other disease, so that there was no doubt about the diagnosis. There had been no expulsion of a decidua membrane. The case had been considered by another physician as one of hæmatocele.

In the discussion which followed Dr. BACHE EMMET inquired if the sac had shrunk after treatment.

Dr. GRANDIN wished to know why galvanism had been used in preference to faradism. He doubted if the faradic was more dangerous than the galvanic current in these cases.

The PRESIDENT (Dr. Hanks) had used galvanism in one case with the best result. He asked where the poles should be placed by preference.

Dr. HARRISON, in reply, said the sac had shrunk. He thought the faradic current more likely to cause rupture of the tube than the galvanic current. With regard to the position of the electrodes, they should be placed so as to include as much of the sac as possible.

THE TRANSACTIONS OF THE ALUMNI ASSOCIATION OF  
THE WOMAN'S HOSPITAL, NEW YORK.

*Moseley on the Influence of Cicatricial Tissue in the Angles of  
the Lacerated Cervix.*

The author deals with this subject from a strictly clinical standpoint, and his endeavour is to demonstrate that the so-called cicatricial plug deep in the angles of the lacerated cervix does set up numerous and varied symptoms, and is the cause of, or perpetuates, the anæmia so commonly present in these cases. The presence of this "cicatricial plug" is denied by some gynæcologists, and entirely ignored by others. Amongst those who acknowledge the presence of this plug and the train of symptoms often set up by its presence are Mundé and Emmet.

Dr. Moseley is astonished that its presence is denied, as his experience has led him to believe that this plug is present in almost every case of lacerated cervix, and that it generally extends more deeply on the inner side of the uterus than on the outer side. This extension inwards of the cicatricial plug is, in the author's opinion, the reason that its complete removal can be effected more easily, and with less hæmorrhage than if the plug extended high up on the outer side of the uterus. Several cases are narrated in which this "plug" was removed from patients suffering various symptoms; and in every case the complete removal of the mass was followed by complete amelioration of the symptoms. In conclusion, the author advocates the complete and thorough removal of all cicatricial tissue from the angles of a lacerated cervix; by doing so our patients will be cured and the cause of gynæcology advanced.

*Goffe on the Differentiation of Pelvic Cellulitis.*

After shortly discussing the views held on this subject by various authorities, as, Worrat in France, Aran, Bernutz and Goupil, Simpson, Graily Hewitt, Emmet and others, the

author concludes that "cellulitis has been dethroned from the prominent position it has held in uterine pathology, and as a serious complication in gynæcological cases. In its place have come salpingitis and peri-salpingitis, oöphoritis and peri-oöphoritis, lymphadenitis and peritonitic bands and adhesions." The presence of cellulitis he does not deny in all pelvic inflammations, but clinical experience, together with the examinations made at autopsies and laparotomies, has demonstrated to him that cellulitis does not play the rôle formerly attributed to it. The serous membrane is the tissue chiefly attacked in all pelvic inflammations; cellulitis being secondary and of slight importance, as it is comparatively harmless in its action.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

*Influence of Obesity in Young Women upon the Menstrual and Reproductive Functions.*

In a paper on this subject Dr. ANDREW F. CURRIER says: It is somewhat surprising that the law which evidently obtains in this matter has been so generally overlooked by modern and contemporary observers; at least I have found very little reference to it in recent literature. That law may be formulated in the following terms:

1. A woman under 30 years of age who bears four, five, six, or more children in rapid succession and suckles them, prematurely reaches the limit of her physical powers as a reproductive animal, the phenomena of the climacteric supervening. This applies to the average woman under present conditions of civilization, and, in a marked degree, to those who become obese after so frequent pregnancies.

2. A woman under 30 years of age who becomes obese, from whatever cause, will, as a result, be subject to amenorrhœa, or oligomenorrhœa (a term which I have proposed as a synonym for scanty menstruation) and usually to dysmenorrhœa, though menstruation may previously have been nearly or quite painless. If such patients be married sterility



will be the rule. This law, like most other laws, has more or fewer exceptions, but observation and reflection during a not inconsiderable experience have convinced me of its existence.

*The Significance and Localization of Pain in Pelvic Disease.*

By HENRY C. COE, M.D.

An interesting article read before the New York Neurological Society in 1887.

In a short *résumé* the author concludes: (1) That pelvic pain has its origin more often in the perimetric tissues than in any particular organ, being due to irritation of nerve trunks rather than nerve endings. (2) That the reflex, or transferred, pains commonly referred to certain lesions in the pelvic organs, may radiate from inflammatory foci in the peritoneum or connective tissue surrounding these organs. (3) That operations upon, or complete removal of, such diseased organs may fail to remove the pain for the reasons stated. (4) That this pain, like other nerve pains, may be sensibly relieved by the proper application of electricity.

ARCHIVES DE TOCOLOGIE.

*A Contribution to the Study of Hydramnios.*

By P. MANTEL.

In this interesting article, in which the author illustrates various points by the narration of cases, the pathogeny of hydramnios is chiefly studied. The author arrives at the following conclusions: (1) An undeniable and frequent coincidence exists between the insertion of the placenta in the lower segment of the uterus and hydramnios. (2) This coincidence seems to have escaped the notice of other observers on account of the difficulty of noting the exact point of placental insertion and the quantity of amniotic fluid. (3) The pressure on the placenta when that organ is inserted low down and the circulatory modifications which take place in the umbilical cord seem to be an obstacle to the natural current of the blood, and to be the cause of a venous stasis

and a very considerable exosmosis towards the amniotic cavity. (4) The channels by which this exosmosis takes place are probably those indicated by Léopold, Winkler, Levison, and Bar, especially if the persistence of the *vasa propria* of Tunghluth is admitted. This persistence is favoured by the excessive pressure in these cases. (5) The placental insertion in the inferior uterine segment does not explain every case of hydramni. But apart from syphilis and a certain number of cases of fœtal monstrosities, a vicious insertion of the placenta seems to play an important part in the production of hydramnios.

#### FRANCE MEDICALE.

##### *Vaginal Antisepsis.* By Dr. F. VERCHERE.

The value of antisepsis in gynæcological and obstetric practice is now becoming generally recognised, and to it much of the improvement in these two departments of medicine must be attributed. A few days before operation or childbirth, vaginal asepsis must be established, by employing solutions of carbolic acid, boric acid, bichloride or biniodide of mercury. Carbolic solutions, to be of use, must be used at a strength of 40 in 1,000, a strength too irritating to the mucous membrane; boric acid, on the other hand, is not powerful enough to destroy germs, and render the parts aseptic. Weak solutions of the mercurial preparations are the most efficacious, and should be administered by the medical man himself, twice a day, several days, before an operation or delivery. After irrigation by either of the mercurial solutions, tampons of iodoform cotton wool should be placed in the vagina, and left there until the next douche is administered. The odour of iodoform is obnoxious to most people, and may be destroyed by Tonga bean, or ground coffee. The same antiseptic precautions must be rigidly carried out after every gynæcological operation as are practised before.

CENTRALBLATT FÜR GYNAKOLOGIE.

*Hæmatoma of the Vulva in the Non-Pregnant.*

By HIMMELFARB.

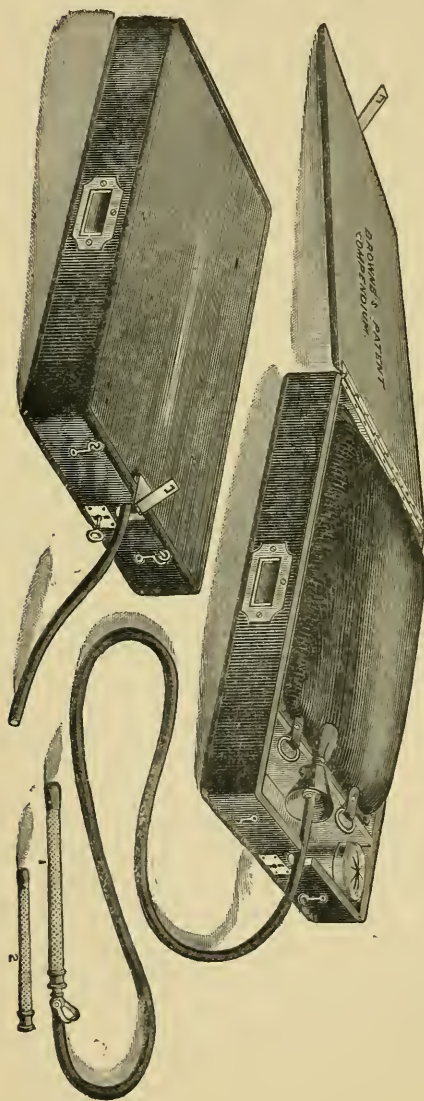
Hæmatoma of the external genitals, except in connection with pregnancy, is of rare occurrence, and is generally the result of violence. The author cites the following case:—The patient, a married woman, 35 years of age, complained of a tumour in the external genitals, which had suddenly developed a week before. The left labium magus was the seat of a tumour, the size of a fist. It was tense, bluish in colour, extremely painful, and obstructed the vaginal outlet. No enlarged veins could be seen anywhere. The internal genitals were normal. The patient stated that immediately after violent coitus, she experienced great pain in the vulva, and shortly after a tumour developed there. Treatment consisted of rest, and cold applications to the tumour, followed by incision, and antiseptic irrigation of the cavity. The author remarks on the size of the tumour, and the cause, and suggests that the general hyperæmia of the genitals following coitus might account for the size of the tumour.

BERLINER KLINISCHE WOCHENSCHRIFT.

*Laceration of the Cervix Uteri.* By EMIL WÆGGERATH.

The following are the conclusions arrived at by the author:—(1) Women with lacerations are more likely to conceive than those without. (2) The position of the uterus is not affected by lacerations. (3) The axis of the uterus is not elongated in consequence of lacerations. (4) Erosions and ulcerations are as common in one class as in the other, and disease of the cervical tissues is not more common in lacerated than in non-lacerated cervixes. (5) Lacerations have no influence in producing uterine disease. (6) Eversion of the lips is nearer the direct result of a laceration.

## NEW INVENTIONS.

*The "Compendium Douche" or Invalid's Self-help.*

UNDER this name an invention has been registered which seems likely to prove serviceable to invalids requiring a douche for any purpose. A glance at the accompanying illustration will show the chief parts in the apparatus. The central arrangement is a flattened bag made of patent inodorous rubber, which is very durable, and capable of withstanding tropical heat. The bag is filled to any required capacity with water or other liquid, which may be medicated with any required drug, and used at any requisite degree of temperature. A tube, in which is a tap which must at first be closed, is then attached to the bag, and the latter is placed on a spring board in a neatly finished, flattened box, the lid of which is closed on the bag, whilst the tube passes out through an aperture in front. The box being then arranged in any convenient position, the outer free end of



the tube is next placed *in situ* ; and the tap being turned on, the instrument is used. The bag automatically empties itself, and the flow of liquid therefrom is gentle, equable, and easily regulated by the height at which the box is placed, as well as by the degree to which the tap is opened. No effort on the part of the patient is necessary, and the patient may of course be in any convenient position in bedroom, bathroom, or W.C. As the liquid in the bag retains its warmth for an hour or two, it may be carried ready for use by doctor or nurse to the patient's house. The "Compendium" may be used as an enema, or as a douche to vagina, ears, nose, or possibly eyes, or for the irrigation of wounds, as bags of any capacity up to two quarts, or even a little more, are made and can be fitted to the instruments. The bags can also be used as hot water bags by screwing in the stopper instead of the efferent tube ; and for rectal alimentation the small "Compendiums" appear to be thoroughly adapted.

The apparatus can be purchased (wholesale) of Messrs. A. Hutchinson and Co., 70, Basinghall Street, London, E.C. ; of all chemists ; and of the inventor and patentee, Miss M. P. Browne, 9, Blandford Square, N.W. The price is one guinea and a half.

*CORRESPONDENCE.*

TO THE EDITOR OF THE "BRITISH GYNÆCOLOGICAL JOURNAL."

46, QUEEN ANNE STREET,  
CAVENDISH SQUARE, W.,  
*June 28th, 1888.*

SIR,—At a meeting of the British Gynæcological Society, held on June 27th, Dr. Murphy exhibited a uterus and its appendages removed by Dr. Péan, of Paris. Dr. Murphy also gave a description of the operation as witnessed by himself.

May I be allowed to point out to readers of your Journal that a description of Dr. Péan's operation of vaginal hysterectomy for uterine fibroids, together with short clinical notes of a case, is to be found in the February, 1887, number of the *BRITISH GYNÆCOLOGICAL JOURNAL*. In the case there recorded the uterus reached above the umbilicus, and was the seat of multiple fibroids. Dr. Péan regards vaginal hysterectomy for fibroids not more dangerous than removal of the uterine appendages, while it is more efficacious; but it is doubtful whether it will, in this country at least, supersede oöphorectomy.

I am, Sir,

Yours obediently,

HENRY T. RUTHERFOORD.

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*NOTES.*

Mr. LAWSON TAIT will read a paper on "The Methods of Success in Abdominal Surgery," at the annual meeting of the American Association of Obstetricians and Gynæcologists to be held in Washington in September.

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We have to record the death on the 20th inst. at Brighton, at the age of 76, from an attack of apoplexy, of Dr. George Thompson Gream, who for a long time was one of the most prominent members of the medical profession in the west of London. Upon the death of Sir Charles Locock, Dr. Gream took the lead in the West-end midwifery practice, which he pursued with great professional success till his retirement some ten or twelve years ago. Dr. Gream attended the present Dowager Empress Frederick at Potsdam in all her confinements except the two first (when Sir Charles Locock was in attendance), and he was also physician accoucheur to the Princess of Wales, and for many years physician and consulting physician accoucheur to Queen Charlotte's Hospital. Dr. Gream was an M.D. of Aberdeen and a Fellow of the Royal College of Physicians of London and a Fellow of the Royal Medical Chirurgical Society. Dr. Gream was twice married—his first wife was a daughter of the late Mr. John Oddie, of Portland Place ; and his second, who survives him, is Lady Gooch, the widow of Sir Edward Sherlock Gooch, of Benacre Hall, Suffolk.

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At the Princess Helena College at Ealing we lately saw the pupils play a cricket match. Never having seen two elevens composed of girls play this game before we were much impressed by the adaptability of the game to the fair sex. As the bowling was not rapid, the batting not hard, the fielding was not calculated to over fatigue the players. No better, healthier or more appropriate game for girls than cricket, played *sous-entendu*, by girls only can be imagined. Any one who sees it will agree that it is infinitely superior to lawn tennis, or any other sport with which we are acquainted. We must con-

gratulate Miss Williamson, the lady principal of the College, in doing such a good work. It is to be hoped that her example may be followed in other schools for girls.

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All books for review and exchanges should be sent to the Editor, 7, Queen Anne Street, London, W.

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The *Revue Illustrée de Polytechnique Medicale* has undertaken to establish a general exhibition of medical and surgical instruments at the Paris exhibition in 1889. Inquiries from intending exhibitors should be addressed without delay to Devauchelle, 85 Rue Lafayette, Paris, or to Dr. Albert Leblond, 53, Rue d'Hauteville, Paris.



## AT COST OF WASHING ONLY!

The great appreciation in which Southall's Sanitary Towels are held by Ladies is shown in the ever-increasing Sales, and, to keep pace with the demand, the Patentees have been compelled to erect special machinery for their more rapid production. Important improvements have recently been introduced in both qualities—namely, a seamless tube, for enclosing the Towel, affording greater comfort and perfect security in the wearing.

ESPECIALLY USEFUL FOR LADIES TRAVELLING.

Protected by Her Majesty's  Royal Letters Patent.

# SOUTHALL'S Sanitary Towels For Ladies

A FEW LETTERS SELECTED FROM THOUSANDS.

The British Medical Journal writes:—“Southall's Sanitary Towel is a much-improved substitute for the old Napkin, which, with its many obvious defects, may now be entirely discarded, and the new Sanitary Towel adopted in its stead.”

“Messrs. SOUTHALL, BROS. & BARCLAY, Birmingham. Sirs,—As the Surgeon to the largest and most important Hospital in this Colony, I wish to thank you for the invention of the “Ladies' Sanitary Towel.” I have a large staff of Lady Nurses, who use nothing else when required. So pleased am I with them, that I have given Messrs. Kempthorne, Prosser & Co. (N.Z. Drug Co.) an order for 1,000, and I have introduced them into a smaller Hospital in Otago.—I am, Sirs, sincerely yours, MAURICE CHILTON, L.R.C.P., Edin. Univ.”

An Eminent Medical Authority writes: “Gentlemen,—As a proof that I most thoroughly appreciate your valuable invention, one of the most valuable inventions for women's comfort I have seen in the quarter of a century I have been in practice, I have distributed amongst my patients nearly four gross of the Towels, and in every single instance in which they have been used they have been most valued and appreciated. My patients find the Towels a great deal cheaper than diapers, in addition to their immense comfort.”

Highly recommended by Professional Nurses.

Miss E. Lloyd, Trained Monthly, Medical and Surgical Nurse, writes (letter dated London, May 7, 1883):—“I have used the Sanitary Towels for my patients during the past year, and found them a great boon for both cleanliness and comfort. I am sure all Ladies would use if this valuable invention could be brought to their notice.”

Miss D. E. Greet, Trained Medical and Surgical Nurse, writes: “London, W., May, 1883.—The “New Sanitary Towels” ARE MOST USEFUL in TRAVELLING; also for Invalids. I have much pleasure in recommending them to Ladies in general for comfort and cleanliness.”

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PROVIDING FOR ONE PENNY

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Sample Packet of One Dozen Towels with Descriptive Circular containing Testimonials from Medical Men, Professional Nurses, &c., by Parcels Post for 1s. 3d. or 2s. 3d.; Six Packets, 6s. 6d. and 12s. 6d.

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For use in accouchement; recommended for Comfort and Cleanliness. These Sheets, 24 by 18 inches, are made of Absorbent Wool and Gauze, which have been rendered Antiseptic. They are very absorbent, of downy softness, and great elasticity. If placed under the patient, they will be found most comfortable; they can be readily removed, and after use they are simply burned. They are thus in every way superior to the ordinary materials used, both for cleanliness, comfort, and safety.

The following Testimonial illustrates their value:—

“Messrs. SOUTHALL, BROS. & BARCLAY, ‘Dalkeith, Midlothian, N.B. Gentlemen,—I saw your Absorbent Sheet for child-bed in use some time ago, and they were pronounced by the lady who used them “the very grandest things ever invented.”—Yours faithfully, J. HISLOP JOHNSTON, M.B. &c.”

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# PITKEATHLY

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## The Prince of British Table Waters.

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*From* JOHN T. GRAHAM, Esq., M.D., M.R.C.S.,

IVY BANK, PERTH, 8th Oct., 1880.

"I have much pleasure in testifying to the excellence of PITKEATHLY water, as aerated by Messrs. REID & DONALD, Perth. It compares very favourably with foreign mineral waters in dietetic qualities, and is, in my opinion, more palatable; and as a laxative during pregnancy it is invaluable, as, taken before breakfast, it is as certain in its effects as the Continental mineral waters, and is both milder in its action and less likely to produce the sickness which so frequently accompanies the operation of the latter."

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*From* ALEX. SIMPSON, Esq., M.A., M.D.,

MARSHALL PLACE, PERTH, 29th Nov., 1880.

"PITKEATHLY mineral waters have long been recognised as of great value in many kinds of disease. I consider them, from the salts they contain, of great use in congestion and other diseases of the liver, in indigestion, and especially in the gouty and rheumatic constitutions. Taken fasting in the morning, they will be found to correct any tendency to sluggish action of the bowels. To the lying-in patient I am convinced no drink will be found so safe, so pleasant to take, and at the same time so likely to prevent any febrile reaction. They have also a tonic action from the slight trace of iron contained in them. The preparation made by REID & DONALD, is thoroughly well aerated, and is an agreeable and wholesome beverage. I cannot offer anything more in its favour than recommend a trial of it, and it will do more than speak for itself."

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